Carrier Voice over IP Performance Management Operation Measurements Reference Volume 1

ATTENTION

The Carrier Voice over IP Performance Management Operation Measurements Reference document uses four volumes to describe operational measurements (listed alphabetically) that provide information on how to load various components of the DMS switch.

What's new in (I)SN09?

The following new OMs have been added to this volume:

- AUTH
- BladeConn
- ConfLoc
- ConvDesk
- CP2
- CPCheckpoint
- db
- DBPRFM
- DBSummary
- DPLOM
- EMERGENCY

Introduction

Operational Measurements (OMs) provide information on how to load various Components of the DMS switch. Periodic scans of switch parts

and activities allow you to gather OM information. Specified parameters define the collection, storage, and transmission of data. OMs provide the following types of data:

- Description
- Registers
  - event counts. Peg counts are registers that increase each time an event occurs.
  - usage counts. Usage counts scan or sample equipment at equal intervals. These counts increase registers when the scan detects equipment in a specific state.
- Associated OM groups

OM information can appear on a terminal or printer. The system can transmit the information to a recording device for additional processing. To request data display at a specified output device, you can enter user commands. You can enter data in tables to schedule the output of the data in advance.

For more information on how to set up an OM system, refer to the *"DMS-100 Family Basic Administration Procedures"*, 297-1001-300.

In this document

The OMs in an office are dynamic and depend on the switch type(s). For comprehensiveness, this document describes OMs available in an office type of OFFCOMB. The document also describes OMs that are associated with specific components and OMs that are common in Carrier Voice over IP and DMS.

The following table lists the OM groups alphabetically (from A to E) and whether they are associated with a component or common in Carrier Voice over IP and DMS. For a description of an OM group, click on the OM group name.

OM groups available in Carrier Voice over IP (Sheet 1 of 10)

Name	Description	Device, Manager or Application
AABS	Automated Alternate Billing Service	Common
AABSFILT	Automated Alternate Billing Service Filtering	Common
AABSHAND	Automated Alternate Billing Service Handoff	Common

OM groups available in Carrier Voice over IP (Sheet 2 of 10)

Name	Description	Device, Manager or Application
AASV	Application Processor Unit-based Advanced Services	Common
ACB	Automatic Call Back	Common
ACCSBNS	Automatic Calling Card Services Billed Number Screening	Common
ACCSBNSE	Automatic Calling Card Service Billed Number Screening Errors	Common
ACCSCCV	Automatic Calling Card Service Calling Card Validation	Common
ACCSCCVE	Automatic Calling Card Service Calling Card Validation Errors	Common
ACCTCODE	(ITOPS) Account Code use	Common
ACDGRP	Automatic Call Distribution Group	Common
ACMS-Canada only	Analog Call Management Services	Common
ACRJ	Anonymous Caller Rejection	Common
ACRTS	Attendant Console Return To Service	Common
ACSYSTR	Attendant Console System Resources	Common
ACTAKEDN	Attendant Console Take Down	Common
ACTRBL	Automated Directory Assistance Service Application Processing Unit	Common
ADASAPU	Automated Directory Assistance Service Application Processing Unit	Common
ADASDSGN	Automated Directory Assistance System Design	Common
ADASSRV	Automated Directory Assistance Service	Common
AIN	Advanced Intelligent Network	Common

OM groups available in Carrier Voice over IP (Sheet 3 of 10)

Name	Description	Device, Manager or Application
AINACG	Advanced Intelligent Network (AIN) Automatic Code Gapping (AINACG)	Common
AINICOFF	Advanced Intelligent Networks Incoming Office-based	Common
AINICSUB	Advanced Intelligent Network Incoming Subscription-based	Common
AINNCR	Advanced Intelligent Networks Non-Call Related	Common
AINOGOFF	Advanced Intelligent Network Outgoing Office-based	Common
AINOGSB2	Advanced Intelligent Networks Outgoing Subscription-based	Common
AINOGSUB	Advanced Intelligent Networks Outgoing Subscription-based	Common
AIOD	Automatic Identified Outward Dialing	Common
AL1SVCOM	UA-AAL1 Switched Virtual Circuit OMs	DTP SPM IW SPM MG4000 MG 9000
AMA	Automatic Message Accounting summary	Common
ANN	Announcements	Common
APOCCS	Application processor node system counts	Common
APSYS	Application Processor Node System	Common
AR	Automatic Recall	Common
ARAN	Automated Room and Authorization Number	Common
ARN	Automatic Recall with Name	Common

OM groups available in Carrier Voice over IP (Sheet 4 of 10)

Name	Description	Device, Manager or Application
ASUFBUS	Application-specific Unit (ASU) Frame Transport Bus (F-bus)	Common
ASUMEMUT	Application-specific Unit Memory Utilization	Common
ATRK	Analog Call Management Services Trunks (ATRK-Canada only)	Common
ATTAMA	AT&T Automatic Message Accounting	Common
ATTAMA2	AT&T Automatic Message Accounting (overflow for OM group ATTAMA)	Common
ATTLAMA	AT&T Local Automatic Message Accounting	Common
AUDSRVS	Audio Node Service Circuits	Gateway Controller
AUTH	Authentication	MCS 5200
AUTSPID	Automated SPID	Common
BCAPCG	Bearer Capability Per Customer Group	Common
BCAPOF	Bearer Capability Per Office	Common
BCLID	Bulk Calling Line Identification	Common
BCLIDNL	Bulk Calling Line Identification No Links	Common
BCLIDO	Bulk Calling Line Identification Data Link Overload	Common
BCTPOOL	Bearer Channel Tandeming Resource Pool	Common
BCTTANDM	Bearer Channel Tandeming Tandemed Calls	Common
BladeConn	Blade Connection	MCS 5200
BLUEBOX	Bluebox Fraud Detection Group	Common

OM groups available in Carrier Voice over IP (Sheet 5 of 10)

Name	Description	Device, Manager or Application
BRSTAT	Bell-Northern Research reduced instruction set computer (BRISC)	CS 2000 - Compact
C7GTLNK	SCCP Global Title OMs Per Link	Common
C7GTWSCR	C7 gateway screening	Common
C7GWSCCP	CCS7 High-speed Link Signaling ATM Adaptation Layer Events Group 2	Common
C7HSLAL1	CCS7 High-speed Link Signaling ATM Adaptation Layer Events Group 1	Common
C7HSLAL2	CCS7 High-speed Link Signaling ATM Adaptation Layer Events Group	Common
C7HSLATM	CCS7 High-speed Link ATM Layer Events	Common
C7HSLCAR	CCS7 High-speed Link Carrier Event	Common
C7LINK1	CCS7 Link Group 1	Common
C7LINK2	CCS7 link group 2	Common
C7LINK3	CCS7 Link Group 3	Common
C7LINK4	CCS7 Additional MTP Layer 3 Events	Common
C7LKSET	CCS7 Linkset	Common
C7LPP	CCS7 Link Peripheral Processor	Common
C7LPP2	CCS7 Link Peripheral Processor 2	Common
C7MTP	CCS7 Message Transfer Part	Common
C7MTPRES	CCS7 Message Transfer Part Restart	Common
C7ROUTE	CCS7 route	Common
C7ROUTE2	CCS7 Route	Common
C7ROUTER	CCS7 Router	Common

OM groups available in Carrier Voice over IP (Sheet 6 of 10)

Name	Description	Device, Manager or Application
C7RTESET	CCS7 Routeset	Common
C7SCCP	CCS7 Signaling Connection Control Part	Common
C7SCCPCO	C7 SCCP Connection Oriented	Common
C7SCCPX	C7 SCCP Connection Extended Unitdata	Common
CAINTRIG	Carrier AIN Trigger	Common
CALLFWD	Call Forward	Common
CALLHOLD	Call Hold	Common
CALLOG	Call Logging	Common
CALLRDT	Call Redirect	Common
CALLWAIT	Call Waiting	Common
CBK	Code Block	Common
CCTOOM	Call Completion With Trunk Optimization-Canada only	Common
CDACTS	Customer Dialed Automatic Coin Toll Service	Common
CDCOM	Customer Data Change Operational Measurements	Common
CDMCCS	Customer-dialed Mechanized Calling Card Service	Common
CEPTPW	CEPT Features Password	Common
CEPTRA	CEPT Features Remote Access	Common
CF3P	Three-port Conference Circuits (CF3P)	Common
CF6P	Six-port Conference Bridge Measurements	Common
CFRA	Call Forward Remote Access	Common

OM groups available in Carrier Voice over IP (Sheet 7 of 10)

Name	Description	Device, Manager or Application
CFWPOTS	Call Forwarding in the POTS Environment	Common
CM	Computing Module	Common
CMG	Call Management Group	Common
CMI	Call Meter Inquiry	Common
CMSGCARR	Call Messenger Carrier	Common
CMSGGEN	Call Messenger General	Common
CNAB	Calling Name Delivery Blocking	Common
CNAMD	Calling Name Delivery	Common
CND	Calling Number Delivery	Common
CNDB	Calling Number Delivery Blocking	Common
CNDXPM	Calling Number Delivery in XMS-based Peripheral Modules	Common
ConfLoc	Conference Locator	MCS 5200
ConvDesk	Converged Desktop	MCS 5200
COT	Customer-originated Trace	MG 4000
CP	Call Processing Software Resources	Common
CP2	Call Processing Software Resources Extension	Common
CPCheckpoint	CP Checkpoint	MCS 5200
CPICG	Call Progress Indication for Customer Groups	Common
CPICKUP	Call Pickup	Common
CPUSTAT	Central Processing Unit Status	Common
CSL	Console Device Maintenance Summary	Common

OM groups available in Carrier Voice over IP (Sheet 8 of 10)

Name	Description	Device, Manager or Application
CSMI	Call Screening, Monitoring, and Intercept	Common
CTFP	Call Transfer Fraud Prevention	Common
CTRYDIR	Country Direct	Common
CWTPOTS	Call Waiting in the Plain Old Telephone Service environment	Common
DAISGEN	General Data Access/information Services	Common
DALINK	Directory Assistance (DA) Link	Common
DAMISC	Directory Assistance (DA) Miscellaneous	Common
DB	Database	MCS 5200
DBPRFM	Database Performance	MCS 5200
DBSummary	Database Summary	MCS 5200
DCM	Digital Carrier Module Maintenance summary	Common
DCRDEST	Dynamically Controlled Routing Destination	Common
DCRICTRK	Dynamically Controlled Routing Incoming Trunk	Common
DCRLINK	Dynamically Controlled Routing link status	Common
DCRMISC	Dynamically Controlled Routing Miscellaneous	Common
DDU	Disk Drive Unit file and maintenance work	Common
DPLOM	Dynamic Packet Line OM	Session Server Lines
DPTNODE	Dynamic Packet Trunk Node	MG 4000 DPT SPM ATM Gateway Controller

OM groups available in Carrier Voice over IP (Sheet 9 of 10)

Name	Description	Device, Manager or Application
DPTOFC	Dynamic Packet Trunk Office	MG 4000, DPT SPM ATM
DPTOFCP	Dynamic Packet Trunk Office Protocol	Common
DRCW	Distinctive Ringing/Call Waiting	Common
DS1CARR	DS-1 Digital Carrier Maintenance Summary	Common
DSCWID	Deluxe Spontaneous Call Waiting Identification	Common
DSINWTS	Direct Signaling Inward Area Telecommunications Service	Common
DSPRMAN	Digital Signal Processor (DSP) Resource Module (RM) Resource Management (RMAN)	MG 9000
DTSR	Dial Tone Speed Recording	MG 9000
DTSRPM	Dial Tone Speed Recording on a Peripheral Module base	Gateway Controller
DUAQ	Dial-up Autoquote	Common
DUAQMOD	Dial-up Autoquote Modem	Common
DUTLGEN	DMS Universal Transport Layer	Common
EACARR	Equal Access Carrier Measurements	Common
EADLD	Special Number Handling	Common
EASHRTRK-U.S. only	Equal Access Shared Trunk Group Traffic Measurements	Common
EATSMS	Equal Access Traffic Separation/traffic Analysis	Common
EBSMSGCT	Electronic Business System Message Center	Common
ECANRMAN	Echo Canceller Resource Management	Common

OM groups available in Carrier Voice over IP (Sheet 10 of 10)

Name	Description	Device, Manager or Application
EIN2	European Intelligent Networks 2 (extension of OM groups EIN and EIN1)	Common
EIUETHER	Ethernet Interface Unit Ethernet	Common
EMERGENCY	Emergency	MCS 5200
ENETMAT	Enhanced Network Matrix card	Common
ENETOCC	Enhanced Network Occupancy	Common
ENETPLNK	Enhanced Network (ENET) Peripheral-side (P-side) Links	IW SPM IP
ENETSYS	Enhanced Network System card	Common
ENG640M1	Engineering 640 Measurements 1	Common
ESP	Essential Service Protection	Common
ESUP	Digital Echo Suppressor	Common
EXNDINV	External Node Inventory	Common
EXT	Extension Block OM	Common

Supplementary OMs

The following documents reference OMs that do not appear in this document:

- *North American DMS-100 Operations Measurements Reference Manual*, 297-8021-814
- *Carrier Voice over IP SN07 OSS (ATM and IP) Advance Feature Guide*, PLN-07AT-OSS
- *Carrier Voice over IP Fault Management Logs Reference*, NN10275-909

AABS

Description

OM group AABS records Automated Alternate Billing Service (AABS) call attempts and dispositions for 0+ TOPS calls in a DMS-200 TOPS office. Feature AABS provides automated handling of 0+ dialed collect, third-number billed, and calling card calls through communication between the DMS switch and a voice services node (VSN). The VSN plays a role similar to that of an operator for 0+ calls by requesting the DMS switch to perform operator-type actions.

The VSN and DMS systems use data links and an application protocol to exchange messages related to billing, network connections, call dispositions, maintenance notifications, and audits.

AABS contains 11 registers that count:

- AABS calling card calls, third-number calls, and collect calls that are successfully handled by a VSN
- AABS calls that are routed to mechanized calling card service (MCCS)
- VSN requests to the DMS switch to attach a dual-tone multifrequency (DTMF) receiver
- successful outcomes of VSN requests to the DMS switch to attach a DTMF receiver
- failed outcomes of VSN requests to the DMS switch to attach a DTMF receiver

The following table lists the key and info fields associated with OM group AABS.

Key field	Info field
None	None

Related functional groups

The Alternate Billing Services (ABS0001) functional group is associated with functional group AABS.

Registers

The following table lists the registers associated with OM group AABS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AABS

Register name	Measures
AABSACBF	Account code billing call failures
AABSACBS	Account code billing calls
ATOMCCSS	AABS successful calling card calls
AABSCOSC	AABS successful collect calls
AABSSTPD	AABS Station Paid
ARCVRFL	AABS receiver fail
ARCVRSUC	AABS receiver success
ATOMCCSI	AABS mechanized calling card service (MCCS) calls
ATOMCCSS	AABS mechanized calling card service (MCCS) call sequencing
AABSRCVR	AABS receiver
AABSTHSC	AABS successful third-number billed calls

AABSACBF

Register type
Peg

Description
AABSACBF counts the account code billing call failures. The register is incremented when AABS is unable to complete an account code billing call request from the VSN due to a bad request or an error detected by the DMS switch.

Associated registers
None

Extension registers
None

Associated logs
None

AABSACBS

Register type
Peg

Description
AABSACBS counts the account code billing calls after being handled by the VSN.

Associated registers
None

Extension registers
None

Associated logs
None

AABSCCSC

Register type
Peg

Description
AABSCCSC counts the AABS calls that are billed to a calling card and successfully handled by a VSN.

Associated registers
None

Extension registers
None

Associated logs
None

AABSCOSC

Register type
Peg

Description
AABSCOSC counts AABS collect calls that are successfully handled by a VSN.

Associated registers
None

Extension registers
None

AABSSTPD

Register type
Peg

Description
AABSSTPD counts the number of automated calls that had a billing class of station paid and were not billed to an account code.

Associated registers
AABSACBS, AABSCCSC, AABSCOSC

Extension registers
None

Associated logs
None

ARCVRFL

Register type
Peg

Description
ARCVRFL counts each AABS receiver fail, that is, when the DMS switch fails to attach a receiver to the calling port in response to a request by the VSN.

Associated registers
AABSRCVR

Extension registers
None

Associated logs
None

ARCVRSUC

Register type
Peg

Description
ARCVRSUC counts each AABS receiver success, that is, when the DMS switch, in response to a request by the VSN, attaches a dual-tone multifrequency receiver; the register also increments if a receiver is already attached.

Associated registers
AABSRCVR, ARCVRSUC, ARCVRFL

Extension registers
None

Associated logs
None

ATOMCCSI

Register type
Peg

Description
ATOMCCSI counts AABS calls that are routed to MCCS before connection to a VSN.

Associated registers
None

Extension registers
None

Associated logs
None

ATOMCCSS

Register type
Peg

Description
ATOMCCSS counts AABS calls that are routed to MCCS to provide sequence calling capability after the DMS switch connects to a VSN.

Associated registers
None

Extension registers
None

Associated logs
None

AABSRCVR

Register type
Peg

Description
AABSRCVR counts each time the VSN requests that the DMS switch attach a dual-tone multifrequency receiver.

Associated registers
ARCVRSUC, ARCVRFL

Extension registers
None

Associated logs
None

AABSTHSC

Register type
Peg

Description
AABSTHSC counts AABS calls that are billed to a third number and successfully handled by a VSN.

Associated registers
None

Extension registers
None

Associated logs
None

AABSFILT

Description

OM group Automated Alternate Billing Service filtering (AABSFILT) measures the overall usage of Automated Alternate Billing Service (AABS) filtering based on the billed number and the reasons for the filtering, such as fraud or bad voice.

The following table lists the key and info fields associated with OM group AABSFILT.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with register AABSFILT.

Registers

The following table lists the registers associated with OM group AABSFILT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AABSFILT

Register name	Measures
FLTAUTO	Filtered automated calls
FLTBOTH	Filtered call for both
FLTFRAUD	Filtered calls for possible fraud
FLTHAND	Attempted handoff filtered automated calls
FLTVOICE	Filtered calls for bad voice

FLTAUTO

Register type
Peg

Description
FLTAUTO counts the number of AABS calls that are filtered based on their billing number.

Associated registers
FLTHAND, FLTFRAUD, FLTBOTH, FLTVOICE

Extension registers
None

Associated logs
None

FLTBOTH

Register type
Peg

Description
FLTBOTH counts the number of times calls are screened for both fraud and inappropriate automation calls.

Associated registers
FLTHAND, FLTFRAUD, FLTAUTO, FLTVOICE

Extension registers
None

Associated logs
None

FLTFRAUD

Register type
Peg

Description
FLTRAUD counts the number of times that calls are filtered through AABS to prevent fraudulent billing.

Associated registers
FLTHAND, FLTBOTH, FLTAUTO, FLTVOICE

Extension registers
None

Associated logs
None

FLTHAND

Register type
Peg

Description
FLTHAND counts the number of AABS handoff attempts that are filtered based on their billed number.

Associated registers
FLTAUTO, FLTBOTH, FLTFRAUD, FLTVOICE

Extension registers
None

Associated logs
None

FLTVOICE

Register type
Peg

Description
FLTVOICE counts the number of times that calls are filtered to prevent inappropriate calls from being automated.

Associated registers
FLTAUTO, FLTBOTH, FLTFRAUD, FLTHAND

Extension registers
None

Associated logs
None

AABSHAND

Description

OM group Automated Alternate Billing Service Handoff (AABSHAND) monitors attempts by TOPS operators to hand off calls to the Automated Alternate Billing Service (AABS) in a DMS-200 TOPS office. TOPS operators can use the AABS to hand off calls that must obtain third-number billing acceptance or station-collect billing acceptance.

The following table lists the key and info fields associated with OM group AABSHAND.

Key field	Info field
None	None

Related functional groups

Functional group Enhanced Services ENSCV0001 is associated with OM group AABSHAND.

Registers

The following table lists the registers associated with OM group AABSHAND and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AABSHAND (Sheet 1 of 2)

Register name	Measures
HANDCOFL	Collect handoff failure
HANDCOSC	Collect handoff success
HANDTHFL	Third-number handoff failure
HANDTHSC	Third-number handoff success
HATTANIF	Handoff to AABS attempts
HATTMISC	Handoff to AABS attempts—other
HATTONI	Handoff to AABS attempts—non-zero-minus ONI calls
HATTZMIN	Handoff to AABS attempts—zero minus calls

Registers for OM group AABSHAND (Sheet 2 of 2)

Register name	Measures
OHNDANIF	Register Operator handoff to an OSSAIN service node for an ANI failure call
OHNDMISC	Register Operator handoff to an OSSAIN service node for a call type other than zero minus, ANI failure, or ONI
OHNDONI	Register Operator handoff to an OSSAIN service node for a non-zero minus ONI call
OHNDZMIN	Register Operator handoff to an OSSAIN service node for a zero minus call
SHANCOFL	Register OSSAIN service node handoff failure for a collect call
SHANCOSC	Register OSSAIN service node handoff success for a collect call
SHANTHFL	Register OSSAIN service node handoff failure for a bill to third call
SHANTHSC	Register OSSAIN service node handoff success for a bill to third call
SHATANIF	Register OSSAIN service node handoff attempt for an ANI fail call
SHATMISC	Register OSSAIN service node handoff attempt for a call type other than 0 minus, ANI fail, or ONI
SHATONI	Register OSSAIN service node handoff attempt for an ONI call
SHATZMIN	Register OSSAIN service node handoff attempt for a 0 minus call

HANDCOFL

Register type
Peg

Description
HANDCOFL counts attempts to hand off a call to the AABS for station-collect billing acceptance that are unsuccessful because of resource unavailability. Resource unavailability includes absence of a voice link to the voice service node (VSN), and failure of the datalink between DMS central control and the VSN.

Associated registers
HATTZMIN, HATTANIF, HATTONI, HATTMISC, HANDTHSC, HANDCOSC, HANDTHFL

Validation Formula
HATTZMIN + HATTANIF+ HATTONI + HATTMISC = HANDTHSCF+ HANDCOSC + HANDTHFL + HANDCOFL

Extension registers
None

Associated logs
None

HANDCOSC

Register type
Peg

Description
HANDCOSC counts successful attempts to hand off a call to the AABS for station-collect billing acceptance.

Associated Registers
HATTZMIN, HATTANIF, HATTONI, HATTMISC, HANDTHSC, HANDCOFL, HANDTHFL

Validation Formula
HATTZMIN + HATTANIF+ HATTONI + HATTMISC = HANDTHSCF+ HANDCOSC + HANDTHFL + HANDCOFL

Extension registers
None

Associated logs
None

HANDTHFL

Register type
Peg

Description
HANDTHFL counts attempts to hand off a call to the AABS for third-number billing acceptance that are unsuccessful because of resource availability. Resource unavailability includes absence of a voice link to voice service node (VSN), and failure of the datalink between the DMS central control and the VSN.

Associated Registers
HATTANIF, HATTONI, HATTMISC, HANDTHSC, HANDCOSC, HANDCOFL

Validation Formula
HATTZMIN + HATTANIF+ HATTONI + HATTMISC = HANDTHSCF+ HANDCOSC + HANDTHFL + HANDCOFL

Extension registers
None

Associated logs
None

HANDTHSC

Register type
Peg

Description
HANDTHSC counts successful attempts to hand off a call to the AABS for third-number billing acceptance.

Associated registers
HATTZMIN, HATTANIF, HATTONI, HATTMISC, HANDCOSC, HANDTHFL, HANDCOFL

Validation Formula
HATTZMIN + HATTANIF+ HATTONI + HATTMISC = HANDTHSCF+ HANDCOSC + HANDTHFL + HANDCOFL

Extension registers
None

Associated logs
None

HATTANIF

Register type
Peg

Description
HATTANIF counts attempts by an operator to hand off a non-zero-minus automatic number identification (ANI) failure call to the AABS at position release. The call must first have been successfully marked for handoff. Successful marking for handoff is indicated by displaying "HANDOFF" in the AMA STATUS display area of the TOPS 4 screen.

Associated registers
HATTZMIN, HATTONI, HATTMISC, HANDTHSC, HANDCOSC, HANDTHFL, HANDCOFL

Validation Formula
HATTZMIN + HATTANIF+ HATTONI + HATTMISC = HANDTHSCF+ HANDCOSC + HANDTHFL + HANDCOFL

Extension registers
None

Associated logs
None

HATTMISC

Register type
Peg

Description
HATTMISC counts attempts by an operator to hand off a call to the AABS at position release that does not fall into one of the attempt categories covered by registers HATTZMIN, HATTANIF, or HATTONI. The call must first have been successfully marked for handoff. Successful marking for handoff is indicated by displaying "HANDOFF" in the AMA STATUS display area of the TOPS 4 screen.

Associated registers
HATTZMIN, HATTANIF, HATTONI, HANDTHSC, HANDCOSC, HANDTHFL, HANDCOFL

Validation Formula
HATTZMIN + HATTANIF+ HATTONI + HATTMISC = HANDTHSCF+ HANDCOSC + HANDTHFL + HANDCOFL

Extension registers
None

Associated logs
None

HATTONI

Register type
Peg

Description
HATTONI counts attempts by an operator to hand off a non-zero-minus operator number identification (ONI) failure call to the AABS at position release. The call must first have been successfully marked for handoff. Successful marking for handoff is indicated by displaying "HANDOFF" in the AMA STATUS display area of the TOPS 4 screen.

Associated registers
HATTZMIN, HATTANIF, HATTMISC, HANDTHSC, HANDCOSC, HANDTHFL, HANDCOFLI

Validation Formula
HATTZMIN + HATTANIF+ HATTONI + HATTMISC = HANDTHSCF+ HANDCOSC + HANDTHFL + HANDCOFL

Extension registers
None

Associated logs
None

HATTZMIN

Register type
Peg

Description
HATTZMIN counts attempts by an operator to hand off a non-zero-minus (0-) call to the AABS at position release. The call must first have been successfully marked for handoff. Successful marking for handoff is indicated by displaying "HANDOFF" in the AMA STATUS display area of the TOPS 4 screen.

Associated registers
HATTANIF, HATTONI, HATTMISC, HANDTHSC, HANDCOSC, HANDTHFL, HANDCOFL

Validation Formula
HATTZMIN + HATTANIF+ HATTONI + HATTMISC = HANDTHSCF+ HANDCOSC + HANDTHFL + HANDCOFL

Extension registers
None

Associated logs
None

OHNDANIF

Register type
Peg

Description
OHNDANIF is pegged each time an operator attempts a handoff to an OSSAIN service node for an ANI failure call.

Associated registers
None

Extension registers
None

Associated logs
None

OHNDMISC

Register type
Peg

Description
OHNDMISC is pegged each time an operator attempts a handoff to an OSSAIN service node for call types other than 0 minus, ANI failure, or ONI.

Associated registers
None

Extension registers
None

Associated logs
None

OHNDONI

Register type
Peg

Description
OHNDONI is pegged each time an operator attempts a handoff to an OSSAIN service node for a non-zero-minus ONI call.

Associated registers
None

Extension registers
None

Associated logs
None

OHNDZMIN

Register type
Peg

Description
OHNDZMIN is pegged each time an operator attempts a handoff to an OSSAIN service node for a 0 minus call.

Associated registers
None

Extension registers
None

Associated logs
None

SHANCOFL

Register type
Peg

Description
SHANCOFL is pegged each time a call cannot be handed off to AABS for Collect Billing Acceptance because of resource unavailability, including no voice link to the VSN and DMS CC to VSN datalink failure conditions.

Associated registers
None

Extension registers
None

Associated logs
None

SHANCOSC

Register type
Peg

Description
SHANCOSC is pegged each time a voice link to a VSN is obtained and a call is successfully handed off to AABS for Station Collect Billing Acceptance.

Associated registers
None

Extension registers
None

Associated logs
None

SHANTHFL

Register type
Peg

Description
SHANTHFL is pegged each time a call cannot be handed off to AABS for Third Number Billing Acceptance because of resource unavailability; including no voice link to the VSN and DMS CC to VSN datalink failure conditions

Associated registers
None

Extension registers
None

Associated logs
None

SHANTHSC

Register type
Peg

Description
SHANTHSC is pegged each time a voice link to a VSN is obtained and a call is successfully handed off to AABS for third-number billing acceptance.

Associated registers
None

Extension registers
None

Associated logs
None

SHATANIF

Register type
Peg

Description
SHATANIF is pegged each time an SN attempts a handoff to AABS for an ANI failure call.

Associated registers
None

Extension registers
None

Associated logs
None

SHATMISC

Register type
Peg

Description
SHATMISC is pegged each time an SN attempts a handoff to AABS for call types other than 0 minus, ANI failure, or ONI.

Associated registers
None

Extension registers
None

Associated logs
None

SHATONI

Register type
Peg

Description
SHATONI is pegged each time an SN attempts a handoff to AABS for a non-zero-minus ONI call.

Associated registers
None

Extension registers
None

Associated logs
None

SHATZMIN

Register type
Peg

Description
SHATZMIN is pegged each time an SN attempts a handoff to AABS for a 0 minus call.

Associated registers
None

Extension registers
None

Associated logs
None

AASV

Description

Application processor unit-based advanced services (AASV) measures the call processing engine (CPE) channel usage for advanced services that use CPEs based on an application processor unit (APU) An example of such a service is Automated Directory Assistance Service (ADAS).

For each APU providing CPE channels, the group measures the following activities:

- total number of channel allocations
- an allocation high water mark
- channel traffic usage
- unavailable channel usage
- idle channel usage
- channel failures
- failed service data synchronization

The following table lists the key and info fields associated with OM group AASV.

Key field	Info field
APUnnnX	ADAS <1 to 100>

The APUnnnX is the node name, where nnn is a zero-padded number indicating its node number in tables LIUINV, SNIXINFO, and SNIXAPPL.

Examples: APU001X, APU923X, and APU000X

ADAS is the name of the only service provided by the APU, and the channel capacity as reflected in table ESRVCAP, which is a decimal number from 1 to 100.

Related functional groups

The following functional groups are related to OM group AASV:

- Traffic Operator Position System (TOPS)
- Automated Directory Assistance Service (ADAS)

Registers

The following table lists the registers associated with OM group AASV and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AASV

Register name	Measures
AASVALOC	AASV allocation
ASSVFL	AASV faults
AASVHWM	AASV high water mark
AASVIDLE	AASV idle
AASVSFL	AASV data synchronization faults
AASVTRAF	AASV traffic
AASVUNAV	AASV unavailable

AASVALOC

Register type
Peg

Description
AASVALOC counts the number of allocations for an APU during the collection period. The register is used to determine the number of calls processed.

Associated registers
None

Extension registers
None

Associated logs
None

ASSVFL

Register type
Peg

Description
ASSVFL counts the number of service circuit failures that are caused by the APU or the service process on it transitional to an unavailable state. This register is used to measure service failure rates.

Associated registers
None

Extension registers
None

Associated logs
None

AASVHWM

Register type
Peg

Description
AASVHWM counts the largest number of calls handled simultaneously by an APU during the collection period. This register is used to measure service load balancing.

Associated registers
None

Extension registers
None

Associated logs
None

AASVIDLE

Register type
Peg

Description
AASVIDLE counts the number of APU channels that are available but unused during the 10 s scan period. It used to measure service availability.

Associated registers
AASVTRAF, AASVUNAV

Extension registers
None

Associated logs
None

AASVSFL

Register type
Peg

Description
AASVSFL counts the number of failed data synchronization attempts during the 10 s collection period.

Associated registers
None

Extension registers
None

Associated logs
None

AASVTRAF

Register type
Peg

Description
AAVTRAF counts the number of available but unused APU channels during the 10 s scan period. It is used to measure service availability.

Associated registers
AASVIDLE, AASVUNAV

Extension registers
None

Associated logs
None

AASVUNAV

Register type
Peg

Description
AASVUNAV counts the number of datafilled circuits that are unavailable for use due to system- or manual-busy conditions, or other failure conditions. It is used to measure service availability, and it is updated every 10 s.

Associated registers
AASVIDLE, AASVTRAF

Extension registers
None

Associated logs
None

ACB

Description

OM group Automatic Call Back (ACB) provides information on the use of the ACB feature for an office. You can obtain this feature alone or as part of the common access group of features.

ACB counts the following events:

- universal access attempts and denials
- feature activations, denials, and reactivation
- software resource shortages
- denial announcement and tones
- immediate and delayed processing
- timeouts
- originate, terminate, and resume scanning
- selective call rejections
- subscriber-terminated requests
- terminations that are not normal
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain registers when subscribers do one of the following from an off-board application:
  - query the status and/or programmed information of corresponding subscribed-to services
  - generate a request to activate, deactivate or change the services

  For more information about the Off-board Service Control feature, refer to *"Advanced Intelligent Network Essentials Service Implementation Guide*", 297-5161-021, and the *"Advanced Intelligent Network Essentials Service Enablers*", 297-5161-022.

  The Off-board Service Control feature applies only to DMS.

The following table lists the key and info fields associated with OM group ACB.

Key field	Info field
None	None

Related functional groups

Functional group CLASS/CMS is associated with OM group ACB.

Registers

The following table lists the registers associated with OM group ACB and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACB (Sheet 1 of 2)

Register name	Measures
ACBABT	ACB abnormal termination
ACBACBN	ACB attempts terminate on a network
ACBATT	ACB attempts
ACBDATT	ACB deactivation attempts
ACBDENY	ACB denial
ACBDLAY	ACB delay
ACBFDEN	ACB feature denied
ACBIMED	ACB immediate
ACBLTDA	ACB long-term denial announcement
ACBNIMED	Immediately processed internodal ACB requests
ACBOSCN	ACB originating scanning
ACBOVFL	ACB software resource overflow
ACBRACT	ACB reactivation
ACBRSCN	ACB resume scanning
ACBSCR	ACB selective call rejection
ACBSTDA	AB short-term denial announcement
ACBSTDT	ACB short-term denial tone
ACBSTR	ACB subscriber terminated requests

Registers for OM group ACB (Sheet 2 of 2)

Register name	Measures
ACBTIME	ACB timeout
ACBTSCN	ACB terminating scanning
ACBUNIV	ACB common access attempts

ACBABT

Register type
Peg

Description
ACBABT counts ACB requests that terminate during delayed processing. Requests terminate during delayed processing because of interswitch problems like network congestion, or system errors. System errors result in SYFL treatment.

ACBATT increases when ACBABT increases.

Associated registers
ACBATT

Extension registers
None

Associated logs
LINE138

ACBACBN

Register type
Peg

Description
ACBACBN counts call attempts made on a line with the ACB feature that terminates on a network.

Associated registers
None

Extension registers
None

Associated logs
None

ACBATT

Register type
Peg

Description
ACBATT increases when a user dials the ACB feature activation code. ACBATT increases when ACBRACT increases.

Associated registers
ACBRACT

Extension registers
None

Associated logs
None

ACBDATT

Register type
Peg

Description
ACBDATT increases when a user dials the ACB feature deactivation code.

For DMS only: ACBDATT is pegged when the ACB Update message to deactivate ACB service is received (off-board service update request).

Associated registers
ACBUNIV

Extension registers
None

Associated logs
None

ACBDENY

Register type
Peg

Description
ACBDENY counts the number of ACB universal access attempts denied because the DENYACB option is in effect.

When ACBDENY increases, ACBFDEN increases.

Associated registers
ACBFDEN

Extension registers
None

Associated logs
None

ACBDLAY

Register type
Peg

Description
ACBDLAY counts delays in processing that occur when the subscriber dials the ACB feature activation code and the line is busy.

ACBATT increases when ACBDLAY increases.

Associated registers
ACBATT

Extension registers
None

Associated logs
AMAB117

ACBFDEN

Register type
Peg

Description
ACBFDEN increases when a user cannot activate ACB. (The user cannot activate ACB because the feature is not available on the line or in the office.) ACBFDEN also increases when other features in use prevent the use of ACB. For example, the system cannot cause ACB on the second leg of a three-way call.

The system routes the call to NACK (negative acknowledgement) or FNAL (feature not allowed) treatment when register ACBFDEN increases.

ACBATT increases when ACBFDEN increases.

Associated registers
ACBATT

Extension registers
None

Associated logs
LINE138

ACBIMED

Register type
Peg

Description
ACBIMED increases when a subscriber dials the ACB feature activation code and ACB occurs immediately.

ACBATT increases when ACBIMED increases. ACBIMED increases when ACBSCR increases.

Associated registers
ACBATT, ACBSCR

Extension registers
None

Associated logs
AMAB117

ACBLTDA

Register type
Peg

Description
ACBLTDA increases when a caller receives a long-term denial announcement after an attempt to activate ACB.

ACBATT increases when ACBLTDA increases.

Associated registers
ACBATT

Extension registers
None

Associated logs
None

ACBNIMED

Register type
Peg

Description
ACBNIMED increases when the system immediately processes an internodal ACB request.

Associated registers
TCAPUSAG_TCRTERR, which counts return error components sent or received. The register increases because the response to the queue call component of the first query is a return error component. A return error component indicates that the system did not queue the call.

Extension registers
None

Associated logs
None

ACBOSCN

Register type
Peg

Description
ACBOSCN increases when an ACB request results in originating scanning. The register increases once for each ACB request. The requests do not include those that the system increases in ACBTSCN (terminating scanning).

Associated registers
None

Extension registers
None

Associated logs
None

ACBOVFL

Register type
Peg

Description
ACBOVL increases when a call receives short-term denial tone. A call receives short-term denial tone because software resources are not available to activate ACB. The system routes the call to NOSR, NOSC, or NBLH treatment when register ACBOVFL increases.

ACBATT increases when ACBOVFL increases.

Associated registers
ACBATT

Extension registers
None

Associated logs
LINE138

ACBRACT

Register type
Peg

Description
ACBRACT increases when the subscriber dials an ACB activation code for a call that already has an ACB or automatic recall request.

ACBATT increases each time ACBRACT increases.

Associated registers
ACBATT

Extension registers
None

Associated logs
None

ACBRSCN

Register type
Peg

Description
ACBRSCN increases when scanning resumes for ACB. The scanning resumes for ACB after the originating office receives an indication that the called line is busy.

Associated registers
None

Extension registers
None

Associated logs
None

ACBSCR

Register type
Peg

Description
ACBSCR increases when the system uses the ACB against a line with the SCR option.

ACBIMED increases when ACBSCR increases.

Associated registers
ACBIMED

Extension registers
None

Associated logs
None

ACBSTDA

Register type
Peg

Description
ACBSTDA increases when the system routes a call to a short-term denial announcement that follows an attempt to activate ACB. The system does not process the ACB request because the called line has a call forwarding service activated.

ACBATT increases when ACBSTDA increases.

Associated registers
ACBATT

Extension registers
None

Associated logs
None

ACBSTDT

Register type
Peg

Description
ACBSTDT increases when a call receives short-term denial tone that follows an attempt to ACB. When ACBSTDT increases, the system routes the call to one of the following treatments:

- NACK (negative acknowledgement)
- NOSR (no software resource)
- NOSC (no service circuit)
- NBLH (network blockage heavy traffic)
- FNAL (feature not allowed)
- SYFL (system failure)

ACBATT increases when ACBSTDT increases.

Associated registers
ACBATT

Extension registers
None

Associated logs
LINE138

ACBSTR

Register type
Peg

Description
ACBSTR increases when a subscriber deactivates an ACB request.

Associated registers
None

Extension registers
None

Associated logs
None

ACBTIME

Register type
Peg

Description
ACBTIME counts ACB requests that exceed the time out period during delayed processing. This condition occurs when T10 or T6 expires, or when the number of ringbacks not answered reaches the maximum count.

The T6 is a duration time for ACB/AR at the originating switch that the system causes if the called part is busy.

The T10 is a timer at the originating and the terminating switches. The system uses T10 to control the total time a caller can stay in the queue for ACB/AR calls.

The system enters T6 and T10 in table RESOFC.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

ACBTSCN

Register type
Peg

Description
ACBTSN increases when an ACB request receives confirmation of terminating scanning. The register increases for each ACB request.

Associated registers
None

Extension registers
None

Associated logs
None

ACBUNIV

Register type
Peg

Description
ACBUNIV counts each time a universal user dials an ACB access code.

One of ACBATT or ACBDATT increases each time register ACBUNIV increases.

For DMS only: ACBUNIV is pegged when the ACB Update message to deactivate the Universal ACB service is received (off-board service update request).

Associated registers
ACBATT, ACBDATT

Extension registers
None

Associated logs
None

ACCSBNS

Description

OM group Automatic Calling Card Services Billed Number Screening (ACCSBNS) provides information on billed number screening (BNS) database queries and responses. When a subscriber or operator requests a calling card validation, third number billing, or collect call, the switching office launches a database query to obtain the correct validation information. The registers count query messages returned to the operator. The messages indicate if the system must verify, accept, or reject the call. The calls are for collect calls, third number billing, and public or semi-public telephones. The system returns messages to the operator that indicate that the query was not correctly answered. The query was not correctly answered because of software failures or services that are not available. The registers also count these messages.

The following table lists the key and info fields associated with OM group ACCSBNS.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group ACCSBNS:

- CCS7
- TCAP
- SDB
- LIDB line Information Database

Registers

The following table lists the registers associated with OM group ACCSBNS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACBSBNS (Sheet 1 of 3)

Register name	Measures
BNSACGBL	BNS automatic call gapping blockage
BNSALLCO	BNS allows collect calls

Registers for OM group ACBSBNS (Sheet 2 of 3)

Register name	Measures
BNSALLTH	BNS allows third number billing calls
BNSCANQY	BNS canceled query
BNSCOMP	BNS unexpected component sequence
BNSDATA	BNS unexpected data value
BNSDBFC	BNS database failure or congestion
BNSMISCF	BNS miscellaneous failure conditions
BNSNETRE	BNS unavailable network resource
BNSNOACG	BNS not blocked for automatic call gapping
BNSNOCOL	BNS no collect calls
BNSNOREC	BNS no records
BNSNOTH	BNS no third-number billing calls
BNSPCNLS	BNS public coinless
BNSPUBCN	BNS public coin
BNSRAFTT	BNS returned after time out
BNSSEMIC	BNS semi-public coinless
BNSSPTRA	BNS signaling connection control point translation problem
BNSTIOUT	BNS timed out
BNSTOTAL	BNS total number of billed number screening queries
BNSUNAVA	BNS data unavailable
BNSUNOWN	BNS service or equipment not known
BNSVCOOP	BNS verify collect calls with live operator
BNSVERCO	BNS verify collect call

Registers for OM group ACBSBNS (Sheet 3 of 3)

Register name	Measures
BNSVERTH	BNS verify third-number billing calls
BNSVTHOP	BNS verify third-number billing calls with live operator

BNSACGBL

Register type
Peg

Description
BNSACGBL counts BNS database queries that the system blocks because of automatic call gapping (ACG). The ACG controls the flow of queries to a service control point (SCP) for an overload condition.

Associated registers
None

Extension registers
None

Associated logs
None

BNSALLCO

Register type
Peg

Description
BNSALLCO counts BNS database queries that the system answers with a message. This message indicates that the system allows collect calls.

Associated registers
None

Extension registers
None

Associated logs
None

BNSALLTH

Register type
Peg

Description
BNSALLTH counts BNS database queries that the system answers with a message. This message indicates that third-number billing calls are allowed.

Associated registers
None

Extension registers
None

Associated logs
None

BNSCANQY

Register type
Peg

Description
BNSCANQY counts BNS database queries that the system cancels when the subscriber abandons the call. BNSCANQY also counts BNS database queries when the operator cancels the query before the system receives the database answer.

Associated registers
None

Extension registers
None

Associated logs
None

BNSCOMP

Register type
Peg

Description
BNSCOMP counts BNS database queries that the system returns when the system cannot answer the queries. The system cannot answer the queries because of a wrong sequence of message components.

Associated registers
None

Extension registers
None

Associated logs
None

BNSDATA

Register type
Peg

Description
BNSDATA counts BNS database queries that the system returns when the system cannot respond to the queries. The system cannot respond to the queries because a wrong data value is present in the query message.

Associated registers
None

Extension registers
None

Associated logs
None

BNSDBFC

Register type
Peg

Description
BNSDBFC counts BNS database queries that return when the system cannot answer the queries. The system cannot answer the queries because of database failure or database congestion.

The diagnostic field of a unit data service (UDTS) message indicates database failure or congestion. The signaling connection control point (SCCP) returns the message to the ACCS application. Diagnostic subsystem congestion indicates database congestion. Diagnostic subsystem failure indicates database failure.

Associated registers
None

Extension registers
None

Associated logs
None

BNSMISCF

Register type
Peg

Description
BNS miscellaneous failure conditions

Associated registers
None

Extension registers
None

Associated logs
None

BNSNETRE

Register type
Peg

Description
BNSNETRE counts BNS database queries that return when the system cannot answer the queries. The system cannot answer the queries because network resources (like announcement services) are not available.

Associated registers
None

Extension registers
None

Associated logs
None

BNSNOACG

Register type
Peg

Description
BNSNOACG counts BNS database queries that the system must block but did not block. The system did not block the queries because the system exceeded the maximum number of automatic call gapping probes.

The ACG probes search for the messages involved when the system duplicates an ACG code.

When BASNOAG increases, the system changes office parameter TOPS_ACCS_ACG_SIZE in table OFCENG to a higher value. Changes to the table require a cold restart.

Associated registers
None

Extension registers
None

Associated logs
None

BNSNOCOL

Register type
Peg

Description
BNSNOCOL counts BNS database queries that the system answers with a message. This message indicates that the system must not accept collect calls.

Associated registers
None

Extension registers
None

Associated logs
None

BNSNOREC

Register type
Peg

Description
BNSNOREC counts BNS database queries that return when the system cannot answer the queries. The system cannot answer because the system cannot find the record of the operating company.

Associated registers
None

Extension registers
None

Associated logs
None

BNSNOTH

Register type
Peg

Description
BNSNOTH counts BNS database queries that the system answers with a message. This message indicates that the system must not accept third-number billing calls.

Associated registers
None

Extension registers
None

Associated logs
None

BNSPCNLS

Register type
Peg

Description
BNSPCNLS counts BNS database queries that the system answers with a message. The message indicates that a call was from a coinless public telephone.

Associated registers
None

Extension registers
None

Associated logs
None

BNSPUBCN

Register type
Peg

Description
BNSPUBCN counts BNS database queries that the system answers with a message. The message indicates that a call was from a public coin telephone.

Associated registers
None

Extension registers
None

Associated logs
None

BNSRAFTT

Register type
Peg

Description
BNSRAFTT counts BNS database answers that the system receives for queries that exceed the timed off period. The system cannot distinguish these replies from unsolicited messages from the database to the switching office.

BNSRAFTT increases when register BNSTIOUT increases.

Associated registers
BNSTIOUT

Extension registers
None

Associated logs
None

BNSSEMIC

Register type
Peg

Description
BNSSEMIC counts BNS database queries the system answers with a message. The message indicates that a call was from a coinless semi-public phone.

Associated registers
None

Extension registers
None

Associated logs
None

BNSSPTRA

Register type
Peg

Description
BNSSPTRA counts BNS database queries that return when the system cannot answer the queries. The system cannot answer the queries because of connection control point (SCCP) translation problems.

The diagnostic field of a unit data service (UDTS) message indicates SCCP translation problems. The SCCP returns the UDTS message to the ACCS application. The diagnostic field reads no translation for an address of this type. The diagnostic field reads no translation for this specific address to indicate SCCP translation problems.

Associated registers
None

Extension registers
None

Associated logs
None

BNSTIOUT

Register type
Peg

Description
BNSTIOUT counts BNS database queries that exceed the time out period before the queries receive a database response.

Associated registers
None

Extension registers
None

Associated logs
None

BNSTOTAL

Register type
Peg

Description
BNSTOTAL counts BNS database queries.

Associated registers
None

Extension registers
None

Associated logs
None

BNSUNAVA

Register type
Peg

Description
BNSUNAVA counts BNS database queries that return because the requested operation is not available in the database.

Associated registers
None

Extension registers
None

Associated logs
None

BNSUNOWN

Register type
Peg

Description
BNSUNOWN counts BNS database queries that return when the system cannot answer the queries. The system cannot answer the system does not know the service or equipment.

Associated registers
None

Extension registers
None

Associated logs
None

BNSVCOOP

Register type
Peg

Description
BNSVCOOP counts BNS database queries that the system answers with a message. The message indicates that the collect call requires live operator validation.

Associated registers
None

Extension registers
None

Associated logs
None

BNSVERCO

Register type
Peg

Description
BNSVERCO counts BNS database queries that the system answers with a message. The message indicates that the system must verify a collect call.

Associated registers
None

Extension registers
None

Associated logs
None

BNSVERTH

Register type
Peg

Description
BNSVERTH counts BNS database queries that the system answers with a message. The message indicates that the system must verify the third number billing call.

Associated registers
None

Extension registers
None

Associated logs
None

BNSVTHOP

Register type
Peg

Description
BNSVTHOP counts BNS database queries that the system answers with a message. This message indicates that third-number billing calls require live operator validation.

Associated registers
None

Extension registers
None

Associated logs
None

ACCSBNSE

Description

OM group Automatic Calling Card Service Billed Number Screening Errors (ACCSBNSE) counts different network errors that occur with queries to the billed number screening (BNS) line information database (LIDB). The BNS consists of collect and third number billing LIDB queries.

Some registers in ACCSBNSE replace registers in OM group ACCSBNS because group ACCSBNS does not count error responses.

Errors that occur when the system launches an LIDB query are in the following categories:

- signaling connection control part (SCCP)
- transaction capability application part (TCAP)
- miscellaneous errors

The SCCP errors occur during routing. The system stores the reason for failure in the diagnostic field of the SCCP part of the message. The TCA Player errors occur at or near the LIDB. The system stores the reason for failure (if caused by protocol problems) in the problem code field of the TCAP part of the message. Other LIDB errors can cause the failure. The system stores these reasons in the error-code field of the TCAP part of the message. The system also stores both reasons for failure in the error code field of the TCAP part of the message.

The following table lists the key and info fields associated with OM group ACCSBNSE:

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group ACCSBNSE:

- CCITT calling cards
- domestic calling cards
- third-number billing
- collect billing

Registers

The following table lists the registers associated with OM group ACCSBNSE and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACCSBNSE

Register name	Measures
BNSDATUN	BNS data unavailable
BNSMISCE	BNS miscellaneous error
BNSMISGR	BNS missing group
BNSMISRT	BNS misrouted
BNSMISSR	BNS missing record
BNSNETCG	BNS network congestion
BNSNETFL	BNS network failure
BNSNONGR	BNS nonparticipating group
BNSNOXLA	BNS no translation for any such address
BNSNOXLS	BNS no translation for this exact address
BNSPROTP	BNS protocol problem
BNSSCRND	BNS screened response
BNSSUBCG	BNS subsystem congestion
BNSSUBFL	BNS subsystem failure
BNSTMOUT	BNS timeout
BNSUNEQU	BNS equipped user
BNSUNEXD	BNS unexpected data
BNSUNNET	BNS unavailable network resource
BNSVACGR	BNS vacant group

BNSDATUN

Register type
Peg

Description
BNSDATUN increases when an LIDB query validates a billing number and receives the data unavailable error code. An empty of non-participating group can cause this error.

Associated registers
None

Extension registers
None

Associated logs
None

BNSMISCE

Register type
Peg

Description
BNSMISCE increases when an LIDB query validates a billing number and receives the miscellaneous error code. The response message contains the error code. The system generates this error if the call gapping feature is on. The system also generates this error if the activity at the LIDB exceeds the maximum set by the call gapping parameters.

BNSMISCE replaces register BNSMISCF in OM group ACCSBNS.

Associated registers
BNSMISCF in OM group ACCSBNS

Extension registers
None

Associated logs
None

BNSMISGR

Register type
Peg

Description
BNSMISGR increases when an LIDB query validates a billing number and receives the missing group error code. The response message contains the error code. This error occurs when the LIDB receives a request for information from outside the supported domain.

Associated registers
None

Extension registers
None

Associated logs
None

BNSMISRT

Register type
Peg

Description
BNSMISRT increases when an LIDB query to validate a billing number results in a response message with the misrouted error code. This error occurs when the LIDB receives a request for information from outside the supported domain.

Associated registers
None

Extension registers
None

Associated logs
None

BNSMISSR

Register type
Peg

Description
BNSMISSR increases when an LIDB query to validate a billing number receives the missing record error code. The response message contains the error code. This error occurs when the line number or special billing number required to process this query is missing in the LIDB.

BNSMISSR replaces register BNSNOREC in OM group ACCSBNS.

Associated registers
BNSNOREC in OM group ACCSBNS

Extension registers
None

Associated logs
None

BNSNETCG

Register type
Peg

Description
BNSNETCG increases when an LIDB query to validate a billing number receives the network congestion error code. The response messages contain the error code. This error occurs when the CCS7 network is congested.

Associated registers
None

Extension registers
None

Associated logs
None

BNSNETFL

Register type
Peg

Description
BNSNETFL increases when an LIDB query to validate a billing number receives the network failure error code. The response message contains the error code. This error occurs when the CCS7 network fails.

Associated registers
None

Extension registers
None

Associated logs
None

BNSNONGR

Register type
Peg

Description
BNSNONGR increases each time an LIDB query to validate a billing number receives the error code Nonparticipating Group. The response message contains the error code. This error occurs when the number belongs to the domain of an exchange carrier that does not participate in LIDB-based services.

Associated registers
None

Extension registers
None

Associated logs
None

BNSNOXLA

Register type
Peg

Description
BNSNOXLA increases each time an LIDB query to validate a billing number receives an error code. The error code is No Translation for Any Such Address. The response message contains the error code. This error indicates an important signaling connection control part (SCCP) operational problem. This operational problem is in the operator services system (OSS) or in the signaling transfer point (STP).

BNSDBFC in OM group ACCSBNS counts BNSNOXLA and BNSNOXLS count errors at an earlier time.

Associated registers
BNSDBFC in OM group ACCSBNS, BNSNOXLS

Extension registers
None

Associated logs
None

BNSNOXLS

Register type
Peg

Description
BNSNOXLS increases each time an LIDB query to validate a billing number receives an error code. The error code is No Translation for This Exact Address. The response message contains the error code. This error occurs when the STP does not have an entry in its translation table for this global title.

BNSDBFC in OM group ACCSBNS counts BNSNOXLS and BNSNOXLA count errors at an earlier time.

Associated registers
BNSDBFC in OM group ACCSBNS, BNSNOXLA

Extension registers
None

Associated logs
None

BNSPROTP

Register type
Peg

Description
BNSPROTP increases each time an LIDB query to validate a billing number receives the protocol problem error code. The response message contains the error code. This error occurs when the LIDB query is not formatted according to protocol.

Associated registers
None

Extension registers
None

Associated logs
None

BNSSCRND

Register type
Peg

Description
BNSSCRND increases each time an LIDB query to validate a billing number receives the screened response error code. The response message contains the error code. This error occurs when the operator services system (OSS) is not authorized to access the requested data.

Associated registers
None

Extension registers
None

Associated logs
None

BNSSUBCG

Register type
Peg

Description
BNSSUBCG increases each time an LIDB query to validate a billing number receives the error code Subsystem Congestion. The response message contains the error code. This error occurs when the LIDB node is congested.

BNSSUBCG counts subsystem congestion errors that BNSDBFC in OM group ACCSBNSE counted earlier.

Associated registers
BNSDBFC in OM group ACCSBNS

Extension registers
None

Associated logs
None

BNSSUBFL

Register type
Peg

Description
BNSSUBFL increases each time an LIDB query to validate a billing number receives the error code Subsystem Failure. The response message contains the error code. This error occurs when the LIDB node fails.

BNSSUBFL counts subsystem failures that BNSDBFC in OM group ACCSBNS counts at an earlier time.

Associated registers
BNSDBFC in OM group ACCSBNS

Extension registers
None

Associated logs
None

BNSTMOUT

Register type
Peg

Description
BNSTMOUT increases when an LIDB query to validate a billing number does not receive a response message in the time limit. This miscellaneous error occurs because of a failure or an excessive delay in the signaling network. This type of an error is an SCCP error. This miscellaneous error also occurs because of a failure in the target LIDB. This type of error is a TCAP error.

BNSTMOUT replaces BNSTIOUT in OM group ACCSBNS.

Associated registers
BNSTIOUT in OM group ACCSBNS

Extension registers
None

Associated logs
None

BNSUNEQU

Register type
Peg

Description
BNSUNEQU increases each time an LIDB query to validate a billing number receives the unequipped user error code. The response message contains the error code. This error occurs as a result of corrupt addressing information in the called party address parameter of the query message.

Associated registers
None

Extension registers
None

Associated logs
None

BNSUNEXD

Register type
Peg

Description
BNSUNEXD increases each time an LIDB query to validate a billing number receives the unexpected data error code. The response message contains the error code. This error occurs when a matching personal identification number (PIN) is not found.

BNSUNEXD replaces BNSDATA in OM group ACCSBNS.

Associated registers
BNSDATA in OM group ACCSBNS

Extension registers
None

Associated logs
None

BNSUNNET

Register type
Peg

Description
BNSUNNET increases each time an LIDB query to validate a billing number receives the unavailable network resource error code. The response message contains the error code. This error occurs if the LIDB is not equipped to process a type of query.

BNSUNNET replaces BNSNETRE in OM group ACCSBNS.

Associated registers
BNSNETRE in OM group ACCSBNS

Extension registers
None

Associated logs
None

BNSVACGR

Register type
Peg

Description
BNSVACGR increases each time an LIDB query to validate a billing number receives the error code Vacant Group. The response message contains the error code. This error occurs when a segment of the number does not have any associated correct individual account numbers.

Associated registers
None

Extension registers
None

Associated logs
None

ACCSCCV

Description

OM group Automatic Calling Card Service Calling Card Validation (ACCSCCV) provides information on calling card validation (CCV) database queries and responses. When a subscriber or operator requests a CCV, third number billing, or a collect call, the switching office launches a database query. Use the database query to obtain the correct validation information. CCV numbers consist of a ten-digit calling card account number (CCAN) and a four-digit personal identification number (PIN).

ACCSCCV counts messages that return to the operator that indicate that the query was answered without success. The queries were answered without success because of software failure, services that are not available, or invalid calling card numbers.

Registers CCVRAFTT, CCVDBFC, and CCVSPTRA are set to zero when feature package NTX825AA is loaded.

The following table lists the key and info fields associated with OM group ACCSCCV.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group ACCSCCV:

- Common Channel Signaling 7
- Transaction Capability Application Part
- Network Service Database System (for Canadian application)
- Line Information Database

Registers

The following table lists the registers associated with OM group ACCSCCV and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACCSCCV (Sheet 1 of 2)

Register name	Measures
CCVACGBL	CCV automatic call gapping blockage
CCVCANQY	CCV canceled queries
CCVCCDEN	CCV calling card account number denied
CCVCOMP	CCV unexpected component sequence
CCVDATA	CCV incorrect data value
CCVDBFC	CCV database failure or congestion
CCVMISCF	CCV miscellaneous failures
CCVNETRE	CCV unavailable network resource
CCVNOACG	CCV not blocked for automatic call gapping
CCVNOPAY	CCV nonpayment
CCVNOPIN	CCV no personal identification number
CCVNOREC	CCV missing customer record
CCVPINHT	CCV personal identification number hunting
CCVPINRE	CCV personal identification number restricted
CCVPINUN	CCV personal identification number unrestricted
CCVRAFTT	CCV returned after time out.
CCVSPTRA	CCV signaling connection control part translation problem
CCVSVRES	CCV service restriction
CCVTHREX	CCV exceed billing threshold
CCVTIOUT	CCV timed out

Registers for OM group ACCSCCV (Sheet 2 of 2)

Register name	Measures
CCVTOTAL	Total number of calling card validation (CCV) queries
CCVUNAVA	CCV data unavailable

CCVACGBL

Register type
Peg

Description
CCVACGBL counts CCV database queries that the system blocks because of automatic call gapping (ACG). ACG controls the flow of queries to a service control point (SCP) during an overload condition.

Associated registers
None

Extension registers
None

Associated logs
None

CCVCANQY

Register type
Peg

Description
CCVCANQY counts CCV database queries that the system cancels when the subscriber abandons the call. CCVCANQY also counts CCV database queries when the operator cancels the query before the database answer is received.

Associated registers
None

Extension registers
None

Associated logs
None

CCVCCDEN

Register type
Peg

Description
CCVCCDEN counts CCV database queries that return because the system denies service on the calling card account number (CCAN).

Associated registers
None

Extension registers
None

Associated logs
None

CCVCOMP

Register type
Peg

Description
CCVCOMP counts CCV database queries that return because of a wrong sequence of message components.

Associated registers
None

Extension registers
None

Associated logs
None

CCVDATA

Register type
Peg

Description
CCVDATA counts CCV database queries that return because of a wrong data value in the query message.

Associated registers
None

Extension registers
None

Associated logs
None

CCVDBFC

Register type
Peg

Description
CCVDBFC counts CCV database queries that return because of database failure or database congestion.

The diagnostic field of a unit data service (UDTS) message indicates database failure or congestion. The signaling connection control part (SCCP) returns the message to the automatic calling card service (ACCS) application. Diagnostic subsystem congestion indicates database congestion. Diagnostic subsystem failure indicates database failure.

Associated registers
None

Extension registers
None

Associated logs
None

CCVMISCF

Register type
Peg

Description
CCVMISCF counts CCV database queries that return for reasons other than those that other registers count.

Associated registers
None

Extension registers
None

Associated logs
None

CCVNETRE

Register type
Peg

Description
CCVNETRE counts CCV database queries that return when they are unanswered because network resources (like announcement services) are not available.

Associated registers
None

Extension registers
None

Associated logs
None

CCVNOACG

Register type
Peg

Description
CCVNOACG counts CCV database queries that the system should block but does not because the maximum number of automatic call gapping (ACG) probes is exceeded.

ACG probes search for messages that are affected when an ACG code is duplicated.

When CCVNOACG is counted, the system should change office parameter TOPS_ACCS_ACG_SIZE in table OFCENG to a higher value. The table change requires a cold restart.

Associated registers
None

Extension registers
None

Associated logs
None

CCVNOPAY

Register type
Peg

Description
CCVNOPAY counts CCV database queries that return to the system when service is denied to a personal identification number (PIN) because of a bill that is not paid.

Associated registers
None

Extension registers
None

Associated logs
None

CCVNOPIN

Register type
Peg

Description
CCVNOPAY counts CCV database queries that return to the system when service is denied to a personal identification number (PIN) because of a bill that is not paid.

Associated registers
None

Extension registers
None

Associated logs

CCVNOPIN

Register type
Peg

Description
CCVNOPIN counts CCV database queries that return to the system because the calling card account number (CCAN) is not assigned a personal identification number (PIN).

Associated registers
None

Extension registers
None

Associated logs
None

CCVNOREC

Register type
Peg

Description
CCVNOREC counts CCV database queries that return when they cannot be answered because a subscriber record is missing.

Associated registers
None

Extension registers
None

Associated logs
None

CCVPINHT

Register type
Peg

Description
CCVPINHT counts CCV database queries that the system answers with a message that indicates that the subscriber tries to enter a personal identification number (PIN) too many times. If the number of tries exceeds a specified threshold within a specified time period, the charge card number is disabled. Suspicion of toll fraud is recorded.

Associated registers
None

Extension registers
None

Associated logs
None

CCVPINRE

Register type
Peg

Description
CCVPINRE counts CCV database queries that are made with a restricted personal identification number (PIN). A restricted PIN permits only station-to-station calls to a billing number with collect service or subscriber-dialed calling card service calls.

Associated registers
None

Extension registers
None

Associated logs
None

CCVPINUN

Register type
Peg

Description
CCVPINUN counts CCV database queries that are made with an unrestricted personal identification number (PIN). An unrestricted PIN is correct for calls to all destinations and may be used for station or person billing.

Associated registers
.None

Extension registers
None

Associated logs
None

CCVRAFTT

Register type
Peg

Description
CCVRAFTT counts CCV database answers that are received for queries that have timed out. These replies are not distinguished from unsolicited messages from the database to the switching office.

When register CCVRAFTT increases, register CCVTIOUT also increases.

Associated registers
CCVTIOUT

Extension registers
None

Associated logs
None

CCVSPTRA

Register type
Peg

Description
CCVSPTRA counts CCV database queries that return when they are not answered because of signaling connection control part (SCCP) translation problems.

The diagnostic field of a unit data service (UDTS) message indicates SCCP translation problems. The SCCP returns the message to the ACCS application. The following diagnostic indicators indicate SCCP translation problems:

- no translation for any such address
- no translation for this exact address

CCVSPTRA is set to zero when feature package NTX825AA is loaded.

Associated registers
None

Extension registers
None

Associated logs
None

CCVSVRES

Register type
Peg

Description
CCVSVRES is inactive.

Associated registers
.None

Extension registers
None

Associated logs
None

CCVTHREX

Register type
Peg

Description
CCVTHREX counts CCV database queries that return because the personal identification number (PIN) is invalid for any reason other than a bill that is not paid.

Associated registers
None

Extension registers
None

Associated logs
None

CCVTIOUT

Register type
Peg

Description
CCVTIOUT counts CCV database queries that time out before they receive a database response.

CCVTIOUT increases when register CCVRAFTT increases.

Associated registers
CCVRAFTT

Extension registers
None

Associated logs
None

CCVTOTAL

Register type
Peg

Description
CCVTOTAL counts CCV database queries.

Associated registers
None

Extension registers
None

Associated logs
None

CCVUNAVA

Register type
Peg

Description
CCVUNAVA counts CCV database queries that return because the requested operation is not available in the database.

Associated registers
None

Extension registers
None

Associated logs
None

ACCSCCVE

Description

OM group Automatic Calling Card Service Calling Card Validation Errors (ACCSCCVE) counts various network errors that occur with queries to the calling card validation (CCV) line information database (LIDB).

Some registers in ACCSCCVE replace registers in operational measurements (OM) group ACCSCCV, as group ACCSCCV no longer counts error responses.

Errors that occur when an LIDB query is launched are categorized as signaling connection control part (SCCP), transaction capability application part (TCAP), and miscellaneous errors.

SCCP errors occur during routing and the reason for failure is stored in the diagnostic field of the SCCP portion of the message. TCAP layer errors occur at or near the LIDB. The reason for failure (if caused by protocol problems) is stored in the problem code field of the TCAP portion of the message, or if the failure is caused by other LIDB errors, the reason is stored in the error code field of the TCAP portion of the message. The reason for failure of either of the two miscellaneous errors is also stored in the error code field of the TCAP portion of the message.

The following table lists the key and info fields associated with OM group ACCSCCVE:

Key field	Info field
None	None

Related functional groups

The following functional group is related to OM group ACCSCCVE: TOPS offices that have exchange alternate billing service (EABS) and perform LIDB queries for CCITT calling cards, domestic calling cards, third-number billing, or collect billing.

Registers

The following table lists the registers associated with OM group ACCSCCVE and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACCSCCVE

Register name	Measures
CCVDATUN	CCV data unavailable
CCVMISCE	CCV miscellaneous error
CCVMISGR	CCV missing group
CCVMISRT	CCV misrouted
CCVMISSR	CCV missing record
CCVNETCG	CCV network congestion
CCVNETFL	CCV network failure
CCVNONGR	CCV nonparticipating group
CCVNOXLA	CCV not blocked for automatic call gapping
CCVNOXLS	CCV no translation for any such address
CCVPROTP	CCV no translation for this specific address
CCVSCRND	CCV protocol problem
CCVSUBCG	CCV screen response
CCVSUBFL	CCV system congestion
CCVTMOUT	CCV subsystem failure
CCVUNEQU	CCV timeout
CCVUNEXD	CCV unequipped user
CCVUNEXD	CCV unexpected data
CCVUNNET	CCV unavailable network resource
CCVVACGR	vacant group

CCVDATUN

Register type
Peg

Description
CCVDATUN is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Data Unavailable. This error can be caused by a vacant or non-participating group.

CCVDATUN replaces register CCVUNAVA in OM group ACCSCCV.

Associated registers
CCVUNAVA in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVMISCE

Register type
Peg

Description
CCVMISGR is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Missing Group. This error occurs when the LIDB receives a request for information from outside the domain that is supported.

CCVMISCE replaces register CCVMISCF in OM group ACCSCCV.

Associated registers
CCVMISCF in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVMISGR

Register type
Peg

Description
CCVMISGR is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Missing Group. This error occurs when the LIDB receives a request for information from outside the domain that is supported.

Associated registers
None

Extension registers
None

Associated logs
None

CCVMISRT

Register type
Peg

Description
CCVMISRT is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Misrouted. This error occurs when the LIDB receives a request for information from outside the domain that is supported.

Associated registers
None

Extension registers
None

Associated logs
None

CCVMISSR

Register type
Peg

Description
CCVMISSR is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Missing Record. This error occurs when the line number or special billing number required to process this query is missing in the LIDB.

CCVMISSR replaces register CCVNOREC in OM group ACCSCCV.

Associated registers
CCVNOREC in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVNETCG

Register type
Peg

Description
CCVNETCG is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Network Congestion. This error occurs when the CCS7 network is congested.

Associated registers
None

Extension registers
None

Associated logs
None

CCVNETFL

Register type
Peg

Description
CCVNETFL is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Network Failure. This error occurs when the CCS7 network fails.

Associated registers
None

Extension registers
None

Associated logs
None

CCVNONGR

Register type
Peg

Description
CCVNONGR is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Nonparticipating Group. This error occurs when the billed number belongs to the domain of an exchange carrier that does not participate in LIDB-based services.

Associated registers
None

Extension registers
None

Associated logs
None

CCVNOXLA

Register type
Peg

Description
CCVNOXLA is incremented each time an LIDB query to validate a calling card number results in a response message with the error code No Translation for Any Such Address. This error indicates a serious signaling connection control part (SCCP) operational problem, either in the operator services system (OSS) or in the signaling transfer point (STP).

CCVNOXLA and CCVNOXLS count errors that were previously counted by register CCVDBFC in OM group ACCSCCV.

Associated registers
CCVNOXLS, CCVDBFC in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVNOXLS

Register type
Peg

Description
CCVNOXLS is incremented each time an LIDB query to validate a calling card number results in a response message with the error code No Translation for This Specific Address. This error occurs when the STP has no entry in its translation table for this global title.

CCVNOXLS and CCVNOXLA count errors that were previously counted by register CCVDBFC in OM group ACCSCCV.

Associated registers
CCVNOXLA, CCVDBFC in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVPROTP

Register type
Peg

Description
CCVPROTP is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Protocol Problem. This error occurs when the LIDB query is not formatted according to protocol.

Associated registers
None

Extension registers
None

Associated logs
None

CCVSCRND

Register type
Peg

Description
CCVSCRND is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Screened

Response. This error occurs when the operator services system (OSS) is not authorized to access the requested data.

Associated registers
None

Extension registers
None

Associated logs
None

CCVSUBCG

Register type
Peg

Description
CCVSUBCG is incremented each time an LIDB query to validate a calling card number results a response message with the error code Subsystem Congestion. This error occurs when there is congestion of the LIDB node.

CCVSUBCG counts subsystem congestion errors that were previously counted by register CCVDBFC in OM group ACCSCCV.

Associated registers
CCVDBFC in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVSUBFL

Register type
Peg

Description
CCVSUBFL is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Subsystem Failure. This error occurs when the LIDB node fails.

CCVSUBFL counts subsystem failures that were previously counted by register CCVDBFC in OM group ACCSCCV.

Associated registers
CCVDBFC in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVTMOUT

Register type
Peg

Description
CCVTMOUT is incremented each time an LIDB query to validate a calling card number does not results in a response message within the time limit. This miscellaneous error occurs either because of a failure or an excessive delay in the signaling network (an SCCP error), or a failure in the target LIDB (a TCAP error).

CCVTMOUT replaces register CCVTIOUT in OM group ACCSCCV.

Associated registers
CCVTIOUT in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVUNEQU

Register type
Peg

Description
CCVUNEQU is incremented each time an LIDB query to validate a calling card number results in a response message with the error code

Unequipped User. This error occurs as a result of corrupt addressing information in the called party address parameter of the query message.

Associated registers
None

Extension registers
None

Associated logs
None

CCVUNEXD

Register type
Peg

Description
CCVUNEXD is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Unexpected Data. This error occurs when no match is found for the personal identification number (PIN).

CCVUNEXD replaces register CCVDATA in OM group ACCSCCV.

Associated registers
CCVDATA in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVUNNET

Register type
Peg

Description
CCVUNNET is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Unavailable Network Resource. This error occurs if the LIDB is not equipped to process a particular type of query.from the database to the switching office.

CCVUNNET replaces register CCVNETRE in OM group ACCSCCV.

Associated registers
CCVNETRE in OM group ACCSCCV

Extension registers
None

Associated logs
None

CCVVACGR

Register type
Peg

Description
CCVVACGR is incremented each time an LIDB query to validate a calling card number results in a response message with the error code Vacant Group. This error occurs when a segment of the billed number has no valid individual account numbers associated with it.

Associated registers
None

Extension registers
None

Associated logs
None

ACCTCODE

Description

OM group ITOPS Account Code use (ACCTCODE) monitors attempts by an International Traffic Operator Position System (ITOPS) or by the operator to validate account codes. ACCTCODE contains four registers that count:

- attempts to validate an account code
- attempts by the operator to verify an account code that fails
- successful attempts by the operator to verify an account code
- attempts by the system to verify an account code that fails

The following table lists the key and info fields associated with OM group ACCTCODE.

Key field	Info field
None	None

Related functional groups

The International DMS-200 for ITOPS operating group associates with OM group ACCTCODE.

Registers

The following table lists the registers associated with OM group ACCTCODE and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACCTCODE

Register name	Measures
ACCTATMP	Account code verification attempt
ACCTFAIL	Operator-initiated verification failures
ACCTSUCC	Operator-initiated verification successes
ACCTSYSF	System-initiated verification failures

ACCTATMP

Register type
Peg

Description
ACCTATMP counts attempts to verify an account code.

Associated registers
ACCTFAIL, ACCTSUCC, ACCTSYSF

Extension registers
None

Associated logs
None

ACCTFAIL

Register type
Peg

Description
AACTFAIL counts attempts initiated by the operator to verify an account code that fails.

Associated registers
ACCTATMP, ACCTSUCC, ACCTSYSF

Extension registers
None

Associated logs
None

ACCTSUCC

Register type
Peg

Description
ACCTSUCC counts successful attempts by the operator to verify an account code.

Associated registers
ACCTFAIL, ACCTATMP, ACCTSYSF

Validation Formula
ACCTATMP = ACCTFAIL + ACCTSUCC + ACCTSYSF

Extension registers
None

Associated logs
None

ACCTSYSF

Register type
Peg

Description
ACCTSYSF counts attempts initiated by the system to verify an account code that fails.

Associated registers
ACCTFAIL, ACCTSUCC, ACCTATMP

Validation Formula
ACCTATMP = ACCTFAIL + ACCTSUCC + ACCTSYSF

Extension registers
None

Associated logs
None

ACDGRP

Description

OM group Automatic Call Distribution group (ACDGRP) provides information about the traffic for an Automatic Call Distribution (ACD) group.

ACD distributes incoming calls equally to a set of answering positions known as ACD agents. ACD agents and directory numbers (DN) are assigned to ACD groups. The system offers the agent with the longest idle time the incoming calls that terminate on any ACD group DNs. If no agent is available, the system queues calls in the correct ACD group call queue, based on priority level. All calls offered to an ACD group are counted by register ACDOFFR. The system increments register ACDNS when the Night Service feature is active. The system also increments register ACDNS when the system forces a call waiting in the queue to the Night Service route.

When all ACD agents are busy, the system queues incoming calls and returns ringing tone to the caller. If the delay exceeds a preset threshold, the caller hears a recorded announcement. When an ACD agent becomes available, the system connects the first incoming call in the queue to this agent position. The system increments register ACDANSR. The system increments register ACDABNDN when a caller abandons a call waiting in the queue.

The system increments register ACDBLOCK when it cannot connect an incoming call and an agent or provide correct treatment.

You can define an overflow threshold for each ACD group. At the overflow threshold, the system deflects all of the following calls to a specified route. The system increments register ACDDFLCT.

You can define a time delay overflow threshold for each ACD group. At this threshold, the system makes calls available to another ACD group. The system increments registers ACDTMOFL and ACDTMINF. When the call becomes available to another group, the original group or the overflow group can answer it. If the other group answers the overflowed ACD call, the system increments register ACDTMANS.

You can place agents of an ACD group in the controlled interflow (CIF) mode that use a CIF key on the supervisor set. The system routes new calls that come into an ACD group in the CIF mode to a subscriber-defined CIF route. Option CIFROUTE in table ACDRTE defines this route. The system increments register ACDCIF when it routes the call to a CIF route.

The following table lists the key and info fields associated with OM group ACDGRP.

Key field	Info field
AUTOMATIC_CALL_DISTRIB_GROUP The maximum number of key fields is 255.	None

You must enter the data for assigning an ACD group in table ACDGRP in order for the ACDGRP OM registers to function.

Field MAXCQSIZ in table ACDGRP specifies the maximum number of calls the system enqueues in the incoming call queue. Beyond this value, the system deflects calls to the route you assigned in field THROUTE. The system increments register ACDDFLCT.

Field MAXWAIT in table ACDGRP specifies the maximum time (in seconds) that a call waits in the incoming call queue. Beyond this value, the system deflects calls to the route you assigned in field THROUTE. The system increments register ACDDFLCT. A value of zero (0) means the ACD group does not have call queuing capability.

Parameter TIME in table ACDGRP specifies the maximum time (in seconds) that a call waits in the priority zero (0) incoming call queue. At expiration, the system sends the call to an overflow queue. At this threshold, the system makes calls available to another ACD group. The system increments registers ACDTMOFL and ACDTMINF.

Parameter CIFROUTE in table ACDGRP specifies the CIF route. The system increments register ACDCIF when it routes a call to a CIF route.

Related functional groups

The following functional groups are associated with OM group ACDGRP:

- Meridian Digital Centrex
- Meridian I (options 111-211)

Registers

The following table lists the registers associated with OM group ACDGRP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACDGRP

Register name	Measures
ACDABNDN	ACD calls abandoned
ACDANSR	ACD calls answered
ACDBLOCK	ACD blocked calls
ACDCIF	ACD controlled interflow calls
ACDCPK	ACD calls parked
ACDDFLCT	ACD calls deflected
ACDDMCT	ACD deny malicious call treatment
ACDICQD	ACD queued calls
ACDNS	ACD Night Service calls
ACDOFFR	ACD calls offered
ACDREQD	ACD calls queued multiple times
ACDRQABN	ACD calls requeued abandoned
ACDRQRTE	ACD calls requeued routed
ACDTMANS	ACD time delay overflow calls answered
ACDTMINF	ACD time delay overflow calls presented
ACDTMOFL	ACD calls time delay overflowed
ACDUSAGE	ACD usage
ACDXFER	ACD transferred between ACD agents

ACDABNDN

Register type
Peg

Description
ACDABNDN counts calls abandoned by the subscriber. These calls are enqueued calls waiting for connection to an ACD agent or unanswered calls terminating to an ACD agent. ACDABNDN does not count calls the ACD agent answers and abandons.

Associated registers
ACDANSR, ACDDFLCT, ACDOFFR, ACDTMANS, ACDTMINF

Validation formula
ACDOFFR + ACDTMINF = ACDANSR + ACDDFLCT + ACDTMANS + ACDABNDN

Note: The validation formula is correct if ACDGRP reports for a 24-h transfer period.

Extension registers
None

Associated logs
None

ACDANSR

Register type
Peg

Description
ACDANSR counts calls answered by the agents in an ACD group.

Associated registers
ACDABNDN, ACDDFLCT, ACDOFFR, ACDTMANS, ACDTMINF

Validation formula
ACDOFFR + ACDTMINF = ACDANSR + ACDDFLCT + ACDTMANS + ACDABNDN

Note: The validation formula is correct if ACDGRP reports for a 24-h transfer period.

Extension registers
None

Associated logs
None

ACDBLOCK

Register type
Peg

Description
ACDBLOCK counts calls blocked for one of the following reasons:

- The system cannot provide the correct treatment for the caller. For example, the caller should receive, for example, a recorded announcement, music, or ringback tone. The incoming call is routed to no software resources (NOSR) treatment.
- The system cannot make a network connection between the incoming call and the agent. The incoming call is routed to negative acknowledgement (NACK) treatment.

Associated registers
None

Extension registers
None

Associated logs
None

ACDCIF

Register type
Peg

Description
ACDCIF counts ACD calls routed to a CIF route.

Associated registers
None

Extension registers
None

Associated logs
None

ACDCPK

Register type
Peg

Description
ACDCPK count the number of ACD calls parked by ACD agents.

Associated registers
None

Extension registers
None

Associated logs
None

ACDDFLCT

Register type
Peg

Description
(ACDDFLCT counts calls the system deflects because they exceed the following field values in table ACDGRP:

- maximum size call queue in field MAXCQSIZ
- maximum waiting time in field MAXWAIT

The system forwards a deflected call to the route specified by field THROUTE in table ACDGRP. A deflected call routing to an overflow ACD group that cannot accept it routes to busy line (BUSY) treatment. The system does not deflect the call again. The system increments the correct register, ACDDFLCT or ACDNS, for the overflow ACD group that gives the BUSY treatment.

The system can forward an ACD group call up to four times, if the call is not routed to an overflow ACD group. On the fifth forwarding attempt, the ACD group call is routed to BUSY treatment.

Associated registers
ACDABNDN, ACDANSR, ACDOFFR, ACDTMANS, ACDTMINF

Validation formula
ACDOFFR + ACDTMINF = ACDANSR + ACDDFLCT + ACDTMANS + ACDABNDN

Note: The validation formula is correct if ACDGRP reports for a 24-h transfer period.

Extension registers
None

Associated logs
ACD120

ACDDMCT

Register type
Peg

Description
ACDDMCT records the number of ACD calls denied termination by the ACD group because of DMCT screening. Incoming ACD calls denied by DMCT screening are not counted as incoming ACD calls offered to the ACD group. Register ACDOFFR is not incremented.

Associated registers
None

Extension registers
None

Associated logs
None

ACDICQD

Register type
Peg

Description
ACDICQD when it queues an incoming ACD group call because a receiving agent is not available.

Associated registers
None

Extension registers
None

Associated logs
None

ACDNS

Register type
Peg

Description
ACDNS counts call attempts to reach an ACD group with the Night Service feature active. When Night Service is active, the system

forwards the incoming call to the route specified in field NSROUTE of table ACDGRP. If the call routes to an overflow ACD group that cannot accept it, the call receives BUSY treatment. The system does not deflect the call again. The system increments the correct register, ACDDFLCT or ACDNS, for the overflow ACD group that gives the BUSY treatment.

The system can forward an ACD group call up to four times. On the fifth forwarding attempt, the ACD group call is routed to BUSY treatment.

Associated registers
ACDABNDN, ACDDFLCT, ACDOFFR, ACDTMANS, ACDTMINF

Validation formula
ACDOFFR + ACDTMINF = ACDANSR + ACDDFLCT + ACDTMANS + ACDABNDN

Note: The validation formula is correct if ACDGRP reports for a 24-h transfer period.

Extension registers
None

Associated logs
None

ACDOFFR

Register type
Peg

Description
ACDOFFR counts calls offered to all ACD DNs in the ACD group. Calls offered when the Night Service feature are active are not included in the count.

Associated registers
ACDABNDN, ACDANSR, ACDDFLCT, ACDTMANS, ACDTMINF

Validation formula
ACDOFFR + ACDTMINF = ACDANSR + ACDDFLCT + ACDTMANS + ACDABNDN

Note: The validation formula is correct if ACDGRP reports for a 24-h transfer period.

Extension registers
None

Associated logs
None

ACDREQD

Register type
Peg

Description
The system increments ACD calls queued multiple times (ACDREQD) when it must queue a call presented to an agent.

Associated registers
None

Extension registers
None

Associated logs
None

ACDRQABN

Register type
Peg

Description
ACDRQABN counts the number of ACD calls abandoned after being enqueued multiple times.

Associated registers
ACDABNDN

Extension registers
None

Associated logs
None

ACDRQRTE

Register type
Peg

Description
ACDRQRTE counts the number of ACD calls the system sends to the requeue route when the timer expires in the ACD group call queue.

Associated registers
None

Extension registers
None

Associated logs
None

ACDTMANS

Register type
Peg

Description
ACDTMANS counts ACD calls answered in another group after being transferred to an overflow queue. Such calls overflow the original ACD group when they been too long in the call queue.

Associated registers
ACDABNDN, ACDANSR, ACDDFLCT, ACDOFFR, ACDTMINF

Validation formula
ACDOFFR + ACDTMINF = ACDANSR + ACDDFLCT + ACDTMANS + ACDABNDN

Note: The validation formula is correct if ACDGRP reports for a 24-h transfer period.

Extension registers
None

Associated logs
None

ACDTMINF

Register type
Peg

Description
ACDTMINF counts ACD calls that overflow the ACD call queue and are presented to another ACD group. The calls remain available to the original group.

Associated registers
ACDABNDN, ACDANSR, ACDDFLCT, ACDOFFR, ACDTMINF

Validation formula
ACDOFFR + ACDTMINF = ACDANSR + ACDDFLCT + ACDTMANS + ACDABNDN

Note: The validation formula is correct if ACDGRP reports for a 24-h transfer period.

Extension registers
None

Associated logs
None

ACDTMOFL

Register type
Peg

Description
ACDTMOFL counts ACD calls that overflow to another group because the TIME field in table ACDGRP was exceeded.

Field TIME in table ACDGRP specifies the time in seconds that a call can wait in the priority 0 incoming call queue before the call moves to an overflow queue.

Associated registers
None

Extension registers
None

Associated logs
None

ACDUSAGE

Register type
Peg

Description
ACDUSAGE increments when a scanned agent line is in the talking state. The system scans each agent line associated with an ACD group every 100 seconds and records the ACD group usage.

Associated registers
None

Extension registers
ACDUSAG2

Associated logs
None

ACDXFER

Register type
Peg

Description
ACDXFER counts the number of ACD calls transferred between ACD agents. The system counts only transfers from one ACD INCALLS key to another ACD INCALLS key.

Associated registers
None

Extension registers
None

Associated logs
None

ACMS-Canada only

Description

OM group Analog Call Management Services (ACMS) provides information on error conditions and resource shortfalls. These conditions and shortfalls in the stored program control-call management services (SPC-CMS) software.

The following table lists the key and info fields associated with OM group ACMS-Canada only.

Key field	Info field
None	None

Related functional groups

The following functional group is associated with OM group ACMS-Canada only: the Stored program control-call management services (SPC-CMS).

Registers

The following table lists the registers associated with OM group ACMS-Canada only and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACMS-Canada only

Register name	Measures
ACMSDERR	ACMS central office data processor data error
ACMSIDX	ACMS SPC trunk index
ACMSNORT	Stored program control-call management services no return message
ACMSOVFL	ACMS SPC-CMS resource overflow

ACMSDERR

Register type
Peg

Description
ACMSDERR counts data errors in the TCAP calling line identification (CLID) message sent for the central office data processor (CODP).

Data errors occur when the TCAP CLID message from the CODP contains invalid data values. Invalid data is missing TCAP parameters or a data value that is outside the valid range.

A data error does not affect completion of the voice call. The arrival of the associated voice call continues when a CLID is not attached.

Associated registers
None

Extension registers
None

Associated logs
None

ACMSIDX

Register type
Peg

Description
ACMSIDX counts calls sent from the central office data processor (CODP) have a valid trunk index that is not entered in Table SPCTRKS.

A trunk index error does not affect the completion of a voice call. When a voice call arrives on a per-trunk signaling trunk, the call continues without calling line identification.

Associated registers
None

Extension registers
None

Associated logs
ACMS100

ACMSNORT

Register type
Peg

Description
Register ACMSNORT counts calls for the message that contains maintenance test results. These results cannot return to the central

office data processor. The reasons that the results cannot return are as follows:

- the message cannot be transferred through the network
- the TCAP software cannot send the message because not enough software resources are available
- the TCAP response encoder software cannot encode the message that contains the maintenance test results

Associated registers
None

Extension registers
None

Associated logs
TCAP101

ACMSOVFL

Register type
Peg

Description
When software resources are not available and TCAP CLID messages cannot be processed, register ACMSOVFL counts these messages.

The following OM groups can identify resources that are not available:

- FTRQ group: tuples FTRQAGENTS, FTRQ8WAREAS, and FRTQ16WAREAS
- EXT group: tuples HISTORY_DATA, HISTORY_CONTROL_DATA, and TC_AP_MEDIUM_EXT_BLK.

The TCAP CLID message process stops. The system does not place in a queue any CLID. This interruption does not affect the associated voice call.

Associated registers

The following registers are associated with ACMSOVFL:

- EXT_EXTOVFL, which counts requests for an extension block that result in failure because extension blocks are not available
- FTRQ_FTRQOVFL, counts requests for a feature queue block that result in failure because feature queue blocks are not available

Extension registers

None

Associated logs

None

ACRJ

Description

OM group Anonymous Caller Rejection (ACRJ) records the behavior of the Anonymous Caller Rejection feature. The subscriber can obtain this feature alone or as part of the universal access group of features.

ACRJ registers count:

- the number of times ACRJ activates with and without universal access
- the number of times ACRJ deactivates with and without universal access
- the number of rejected calls the system routes to an announcement
- the number of times the subscriber is denied the ACRJ feature
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain registers when subscribers do one of the following from an off-board application:
  - query the status and/or programmed information of corresponding subscribed-to services
  - generate a request to activate, deactivate or change the services

  For more information about the Off-board Service Control feature, refer to *Advanced Intelligent Network Essentials Service Implementation Guide*, 297-5161-021, and the *Advanced Intelligent Network Essentials Service Enablers*, 297-5161-022.

  The Off-board Service Control feature applies only to DMS.

The following table lists the key and info fields associated with OM group ACRJ.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group ACRJ.

Registers

The following table lists the registers associated with OM group ACRJ and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACRJ

Register name	Measures
ACRJACT	ACRJ activation
ACRJANN	ACRJ announcement
ACRJAUNV	ACRJ activation universal
ACRJDACT	ACRJ deactivation
ACRJDENY	ACRJ denial
ACRJDUNV	ACRJ deactivation universal

ACRJACT

Register type
Peg

Description
ACRJACT counts the number of times subscribers activate the ACRJ.

For DMS only: ACRJACT is pegged when the ACRJ Update message activates the ACRJ service (off-board service update).

Associated registers
None

Extension registers
None

Associated logs
None

ACRJANN

Register type
Peg

Description
ACRJANN counts the number of rejected calls the system routes to an announcement.

Associated registers
None

Extension registers
None

Associated logs
None

ACRJAUNV

Register type
Peg

Description
ACRJAUNV counts the number of activations of the ACRJ with universal access.

For DMS only: ACRJAUNV is pegged when the ACRJ Update message activates the usage-based ACRJ service (off-board service update).

Associated registers
None

Extension registers
None

Associated logs
None

ACRJDACT

Register type
Peg

Description
ACRJDACT counts the number of times subscribers deactivate the ACRJ.

For DMS only: ACRJDACT is pegged when the ACRJ Update message deactivates the ACRJ service (off-board service update).

Associated registers
None

Extension registers
None

Associated logs
None

ACRJDENY

Register type
Peg

Description
ACRJDENY counts the number of times of the ACRJ cannot be accessed because the DENYACRJ option is in effect.

Associated registers
None

Extension registers
None

Associated logs
None

ACRJDUNV

Register type
Peg

Description
ACRJDUNV counts the number of deactivation of the ACRJ with universal access.

For DMS only: ACRJDUNV is pegged when the ACRJ Update message deactivates the usage-based ACRJ service (off-board service update).

Associated registers
None

Extension registers
None

Associated logs
None

ACRTS

Description

OM group Attendant Console Return To Service (ACRTS) counts attempts to return an attendant console to service. The DMS software will try to return a console to service several times for some error conditions. When these error conditions occur, the total number of attempts does not equal the total of complete and not complete attempts.

Register ACRTSMAT counts each attempt by a system audit to return a console to service. Register ACRTSMAT counts each manual attempt to return a console to service from a MAP terminal.

When an attempt to return a console to service fails, a second register increments that identifies the reason for failure. The following list explains the indications of the registers.

Register	Reason for failure
ACRTSCAR	Carrier failure between the console and the digital modem.
ACRTSCC	A circuit for the console went wrong message or data.
ACRTSCHC	Peripheral module speech path not established.
ACRTSCRL	Seizure of a circuit assigned to the console
ACARTSIL	Both planes of the network lose integrity.
ACARTSNOR	The console did not send a response.
ACRTSNWB	The console lines and the digital modem of the three-port conference circuit (CF3P) did not connect.
ACRTSSE	A fault occurred that no other ACRTS OM group register defines.

The following table lists the key and info fields associated with OM group ACRTS.

Key field	Info field
Table ATTCONS defines the attendant console common language location identifier (CLLI). The maximum number of key fields is 255.	None

Table ATTCONS contains the data used to assign an attendant console to a customer group. The ACRTS key field is the field CONSOLE, the CLLI assigned to the attendant console.

Related functional groups

The following functional groups are associated with OM group ACRTS:

- Meridian Digital Centrex
- Meridian I (options 111-211)

Registers

The following table lists the registers associated with OM group ACRTS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACRTS (Sheet 1 of 2)

Register name	Measures
ACRTSCAR	Attendant console return to service-carrier failure
ACRTSCC	Attendant console return to service-circuit confusion
ACRTSCHC	Attendant console return to service-channel congestion
ACRTSCRL	Attendant console return to service-circuit released
ACRTSIL	Attendant console return to service-integrity lost
ACRTSMAT	Attendant console return to service-manual attempts

Registers for OM group ACRTS (Sheet 2 of 2)

Register name	Measures
ACRTSNOR	Attendant console return to service-no response
ACRTSNWB	Attendant console return to service-network blockage
ACRTSSAT	Attendant console return to service-system audit attempts
ACRTSSE	Attendant console return to service-system error

ACRTSCAR

Register type
Peg

Description
ACRTSCAR counts attempts to return the attendant console to service that fail. Attempts will fail because of carrier failure between the console and the digital modem.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACRTSCC

Register type
Peg

Description
ACRTSCC counts attempts to return failed attendant consoles to service. Attempts fail because a peripheral module that manages the attendant console detects differences in a message or data.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACRTSCHC

Register type
Peg

Description
ACRTSCHC counts attempts to return the failed attendant consoles to service. Failure occurs because the system cannot establish a peripheral module speech path for data-in, data-out, or voice lines.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACRTSCRL

Register type
Peg

Description
ACRTSCRL counts release call messages the system receives for an out-of-service attendant console circuit. Seizure of a circuit just assigned to the attendant console triggers a release call message.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACRTSIL

Register type
Peg

Description
ACRTSIL counts attempts to return the failed attendant consoles to service. The ACRTSIL counts attempts that fail because both planes of the network lose integrity.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACRTSMAT

Register type
Peg

Description
ACRTSMAT counts attempts to return the attendant console to service that occur at a MAP terminal.

Associated registers
None

Extension registers
None

Associated logs
None

ACRTSNOR

Register type
Peg

Description
ACRTSNOR counts attempts to return the attendant console to service that fail. Failure occurs because a response is not received from the console.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACRTSNWB

Register type
Peg

Description
ACRTSNWB counts attempts to return an attendant console (AC) to service that fail. Failure can occur because no connection occurs the AC lines and the digital modem. Failure also can occur because a connection between the AC lines and the three-port conference circuit (CF3P) does not occur.

Associated registers
The following registers are associated with ACRTSNWB:

- ACSYSTR_ACCF3POV, which counts attempts to return failed attendant consoles to service. Attendant consoles fail because a CF3P is not available. Failure occurs as a result of a shortage of CF3Ps in the switch.
- CF3P_CNFOVFL or CF3P_CNFOVFLT of the CF3P OM group, which can increase when there is a shortage of CF3Ps.
- CF3P_CNFOVFL, which counts each time a request made for a CF3P fails because all conference circuits are busy.
- CF3P_CNFOVFLT, which counts each time a non-TOPS circuit request for a CF3P fails. Requests fail because the system reserves the idle circuits for TOPS.

Extension registers
None

Associated logs
IBN104

ACRTSSAT

Register type
Peg

Description
ACRTSSAT counts attempts by the system audit to return an attendant console to service.

Associated registers
None

Extension registers
None

Associated logs
None

ACRTSSE

Register type
Peg

Description
ACRTSSE counts attempts to return the failed attendant consoles. Failure occurs because of an error that no other register counted in the ACRTS OM group.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACSYSTR

Description

OM group Attendant Console System Resources (ACSYSTR) counts system resource shortages and faults that a switch encounters. The ACSYSTR counts shortages and faults that occur when the switch attempts to return an attendant console to service (RTS).

If the original console state is AC system busy, a system audit attempts to return the console to service every minute. The correct register increases for each RTS attempt as long as the fault or resource shortage is present.

The DMS software attempts to return a console to service several times for some error conditions. When error conditions occur, the total number of attempts does not equal the total of complete and not complete RTS attempts.

The following table lists the registers that increase when an RTS attempt fails.

Register	Reason for failure
ACCF3PFL	The CF3P did not respond.
ACCF3POV	The CF3P resource was not available in the switch.
ACDATAER	Attendant console data tables had problems.
ACDMFL	The digital modem did not respond.
ACDMOVFL	The digital modem is not available.
ACERR	Error occurred that is not increased in register ACDMFL or ACCF3 PFL.
ACEXOVFL	The PORTPERMEXT extension block was not available.
ACFLT	A problem caused the console to go down.

The following table lists the key and info fields associated with OM group ACSYSTR.

Key field	Info field
None	OMACINFO is the number of attendant consoles in the switch. The maximum number of consoles is 255.

Related functional groups

The following functional groups are associated with OM group ACSYSTR:

- Meridian Digital Centrex
- Meridian I (options 111-211)

Registers

The following table lists the registers associated with OM group ACSYSTR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACSYSTR (Sheet 1 of 2)

Register name	Measures
ACCF3PFL	Attendant console system resources-three-port conference circuit failure
ACCF3POV	Attendant console system resources-shortage of three port conference circuits
ACDATAER	Attendant console system resource-datafill error
ACDMFL	Attendant console system resources-digital modem failure
ACDMOVFL	Attendant console system resources-shortage of digital modems
ACERR	Attendant console system resources — console errors

Registers for OM group ACSYSTR (Sheet 2 of 2)

Register name	Measures
ACEXOVFL	Attendant console system resources-extension block overflow
ACFLT	Attendant console system resources—console faults

ACCF3PFL

Register type
Peg

Description
ACCF3PFL increases when a three-port conference circuit (CF3P) sends a bad message or no response.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACCF3POV

Register type
Peg

Description
ACCF3POV counts attempts to return failed attendant consoles to service because a (CF3P) is not available.

Associated registers
The following registers are associated with ACCF3POV:

- CNFOVFL or CNFOVFLT increases due to a shortage of CF3Ps.
- CF3P_CNFOVFL increases when the system cannot immediately satisfy a request for DF3P because all conference circuits are busy.
- CF3P_CNFOCFLT increases when the system cannot immediately satisfy anon-TOPS circuit request for a CF3P because the idle circuits are all reserved for TOPs.

Extension registers
None

Associated logs
IBN104

ACDATAER

Register type
Peg

Description
ACDATAER counts attempts to return failed attendant consoles to service. Failure occurs because a difference between attendant console data tables IBNLINES and ATTCONS exists.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACDMFL

Register type
Peg

Description
ACDMFL increases when no response is received from a digital modem. Failure occurs when an error in communication between the digital modem and the maintenance trunk module exists or when a digital modem sends a bad message.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACDMOVFL

Register type
Peg

Description
ACDMOVFL counts attempts to return failed attendant consoles to service. Failure occurs because a digital modem is not available.

Associated registers
NRS_NRSOVFL also increases. NRS_NRSOVFL counts the number of times a network resource selector (NRS) group overflows to another group to find an available digital modem. The NRS group is a digital modem pool.

Extension registers
None

Associated logs
IBN104

ACERR

Register type
Peg

Description
ACERR counts attendant console (AC) errors do not cause register ACDMFL or ACCF3PFL to increase.

Associated registers
None

Extension registers
None

Associated logs
IBN104

ACEXOVFL

Register type
Peg

Description
ACEXOVFL counts failures to return an attendant console to service. Failure occurs when PORTPERMEXT extension block is not available. Office parameter NUMPERMEXT in table OFCENG determines the number of PORTPERMEXT extension blocks available in a switch.

Associated registers
EXT_EXTOVFL, with a key index of three, also increases. The key indices of three corresponds to the office parameter NUMPERMEXT.

Register EXT_EXTOVFL increases when a request for an extension block with a key index of three fails because no blocks are idle.

Extension registers
None

Associated logs
IBN104

ACFLT

Register type
Peg

Description
ACFLT increases when an attendant console fails as a result of a problem.

Associated registers
None

Extension registers
None

Associated logs
IBN102

ACTAKEDN

Description

OM group Attendant Console Take Down (ACTAKEDN) reports on problems that result in an attendant console being taken down. These problems can occur during normal console operation or a system audit.

Many hardware-related errors that an attendant console sustains are not serious enough to justify taking down the console. If problems accumulate between system audits to exceed a threshold (set by office parameter AC_MAX_NUM_ERRORS), the system removes the console from service. Registers ACTDCC, ACTDINLO, ACTDINKY, ACTDPFO, ACTDRES, ACTDCARF, ACTDSYS, ACTDDMFL, and ACTDCTRL increase to indicate the problem that exceeds the threshold.

During system audits, the location of a fault removes the console from service and causes register ACTDAUD to increase. Register ACTDCNR increases when the system removes the console from service because the console does not respond. When the system removes the console from service due to a manual force release from a MAP terminal, register ACTDMAN increases. Register ACTDSERR increases if a software error causes the system to take the console down.

The following table lists the key and info fields associated with OM group ACTAKEDN.

Key field	Info field
The attendant console common language identifier (CLLI) that table ATTCONS defines. Max. number of key fields: 255.	None

Table ATTCONS contains the data used to assign an attendant console to a customer group. The ACTAKEDN key field is the field CONSOLE, the CLLI assigned to the attendant console.

Office parameter AC_MAX_NUM_ERRORS in table OFCSTD specifies the maximum number of hardware-related errors an attendant console can sustain between system audits. When the errors exceed the maximum, the system removes the console from service. If the value of AC_MAX_NUM_ERRORS exceeds the threshold, the system removes the console from service. The correct register in the

ACTAKEDN OM group increases. If a hardware-related error occurs, and the value of AC_MAX_NUM_ERRORS is not exceeded, the correct register in OM group ACTRBL increases. A register in OM group ACTAKEDN does not increase in these events.

Related functional groups

The following functional groups are associated with OM group ACTAKEDN:

- Meridian Digital Centrex
- Meridian I (options 111-211)

Registers

The following table lists the registers associated with OM group ACTAKEDN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACTAKEDN (Sheet 1 of 2)

Register name	Measures
ACTDAUD	Attendant console take down—system audit force release
ACTDCARF	Attendant console take down—carrier failure
ACTDCC	The threshold for Attendant console take down-circuit confusion
ACTDCNR	Attendant console take down—no response
ACTDCTRL	Attendant console take down—circuit released
ACTDDMFL	Attendant console take down—digital modem message failure
ACTDINKY	Attendant console take down—invalid key code
ACTDINLO	Attendant console take down—integrity lost
ACTDMAN	Attendant console take down—manual force release
ACTDPFO	Attendant console take down—parity, framing, or overrun error
ACTDRES	Attendant console take down—reset

Registers for OM group ACTAKEDN (Sheet 2 of 2)

Register name	Measures
ACTDSERR	Attendant console take down—software error
ACTDSYS	Attendant console take down—system audit force release error

ACTDAUD

Register type
Peg

Description
ACTDAUD increases when the system removes an attendant console from service due to a system audit.

Associated registers
ACTDCNR

Extension registers
None

Associated logs
IBN102

ACTDCARF

Register type
Peg

Description
ACTDCARF increases when the system removes an attendant console from service because a carrier failure causes the threshold for ACTDCC to be exceeded.

Office parameter AC_MAX_NUM_ERRORS in table OFCSTD sets the threshold for ACTDCARF. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceeds the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRCARF, which increases when a digital modem ceases to receive carrier information from the attendant console. When ACTRBL_ACTRCARF increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDCARF increases instead of ACTRBL_ACTRCARF

Extension registers
None

Associated logs
IBN102

ACTDCC

Register type
Peg

Description
Office parameter AC_MAX_NUM_ERRORS in table OFCSTD sets the threshold for Register ACTDCC. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceed the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRCC, which counts problem messages that occur on a circuit for the attendant console during normal console operation. If the problem occurs at the source or destination, the source or destination becomes idle. The console loses that party, but the console stays up. If the problem occurs for other connections, the software attempts to recover.

When ACTRBL_ACTRCC increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDCC increases instead of register ACTRBL_ACTRCARF

Extension registers
None

Associated logs
IBN102

ACTDCNR

Register type
Peg

Description
ACTDCNR increases when the system removes the attendant console from service. The system removes the attendant console from service when the console does not respond to a system audit.

Associated registers
ACTRBL_ACTRCNR, which increases when the attendant console does not respond to a system audit.

Extension registers
None

Associated logs
IBN102

ACTDCTRL

Register type
Peg

Description
ACTDCTRL increases when the system removes an attendant console from service. The system removes an associated circuit from service because the system removes an associated circuit from service. This removal exceeds the threshold for register ACTDCC.

The following are causes of the removal from service of the circuit of the attendant console:

- a forced release from a MAP terminal
- the manual or system removal from service of the peripheral module (PM)

The removal from service of the circuit of the attendant console does not occur at the source or destination.

Office parameter AC_MAX_NUM_ERRORS sets the threshold for register ACTDCC. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceed the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRCTRL, which counts each time the system removes a circuit associated with an attendant console from service during normal console operation.

The following are causes of the removal from service of the circuit of the attendant console:

- a forced release from a MAP terminal
- the manual or system removal from service of t he PM

ACTRBL_ACTRCTRL only increases if the system removes the circuit associated with the console from service at the source or destination. The system counts any other occurrence in the correct register of the ACTAKEDN OM group.

When register ACTRBL_ACTRCTRL increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDCARF increases instead of register ACTRBL_ACTCARF

Extension registers
None

Associated logs
IBN102

ACTDDMFL

Register type
Peg

Description
ACTDDMFL increases when the system removes an attendant console from service because a wrong message from the digital modem (DM) exceeds the threshold for register ACTDDMFL.

Office parameter AC_MAX_NUM_ERRORST sets the threshold for ACTDDMFL. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceeds the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRDMFL, which increases when the attendant console receives a wrong message from the DM. When register ACTRBL_ACTRDMFL increases, a common internal counter also

increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

if the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDDMFL increases instead of register ACTRBL_ACTRDMFL

Extension registers
None

Associated logs
IBN102

ACTDINKY

Register type
Peg

Description
ACTDINKY increases when an invalid code on the DM to the attendant console link exceeds the threshold ACTDCC and removes the console from service.

Office parameter AC_MAX_NUM_ERRORS sets the threshold for register ACTDINKY. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceeds the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRINKY, which increases when the attendant console sends an invalid key code to the DM. When register ACTRBL_ACTRINKY increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits. If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the system removes the console from service. Register ACTDINKY increases instead of ACTRBL_ACTRINKY.

Extension registers
None

Associated logs
IBN102

ACTDINLO

Register type
Peg

Description
ACTDINLO increases when the system removes an attendant console from service because integrity loss on a circuit of the attendant console exceeds the threshold for register ACTDINLO.

Office parameter AC_MAX_NUM_ERRORS sets the threshold for register ACTDINLO. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceeds the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRINLO, which increases when an integrity failure occurs on a circuit of an attendant console during normal console operation. If an integrity failure occurs at source or destination, the source or destination is released. For other events, the software attempts to recover.

When register ACTRBL_ACTRINLO increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDINLO increases instead of register ACTRBL_ACTRINLO

Extension registers
None

Associated logs
IBN102

ACTDMAN

Register type
Peg

Description
ACTDMAN increases when the system removes an attendant console from service due to a manual force release from a MAP terminal.

Associated registers
None

Extension registers
None

Associated logs
IBN102

ACTDPFO

Register type
Peg

Description
ACTDPFO increases when the system removes an attendant console from service. Removal from service occurs when one of the following exceeds the threshold for register ACTDPFO:

- hardware parity
- framing
- an overrun error on the DM to attendant console (AC) link

Office parameter AC_MAX_NUM_ERRORS sets the threshold for register ACTDPFO. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceeds the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRPFO, which counts each time a hardware parity, framing, or overrun error occurs on the DM-to-AC link. When register ACTRBL_ACTRPFO increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits. If the number of problems exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the system removes the console from service. This removal causes register ACTDPFO to increase instead of register ACTRBL_ACTRPFO.

Extension registers
None

Associated logs
IBN102

ACTDRES

Register type
Peg

Description
ACTDRES increases when the system removes an attendant console from service. The system removes the console because hardware reset exceeds the threshold for register ACTDRES.

Office parameter AC_MAX_NUM_ERRORS sets the threshold for register ACTDRES. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceeds the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRRES, which increases when an attendant console has a hardware reset. The reasons for a reset include local power failure, or carrier failure from the central control to the attendant console. When register ACTRBL_ACTRRES increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTRES increases instead of register ACTRBL_ACTRRES

Extension registers
None

Associated logs
IBN102

ACTDSERR

Register type
Peg

Description
ACTDSERR increases when the system removes an attendant console from service because of a software error.

Associated registers
ACTRBL_ACTRSERR, which increases when a software error occurs on the attendant console but the error is not severe enough to take down the console.

Extension registers
None

Associated logs
IBN102

ACTDSYS

Register type
Peg

Description
ACTDSYS increases when the system removes an attendant console from service. This removal occurs because an error that is not shown exceeds the threshold for register ACTDSYS.

Office parameter AC_MAX_NUM_ERRORS sets the threshold for register ACTDSYS. The threshold specifies the maximum number of hardware-related errors an attendant console can sustain during an audit interval. When the number of errors exceeds the maximum, the system removes the console from service.

Associated registers
ACTRBL_ACTRSYS, which increases when an error occurs that is not counted by any other register in the ACTRBL group. When register ACTRBL_ACTRSYS increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDSYS increases instead of register ACTRBL_ACTRSYS

Extension registers
None

Associated logs
IBN102

ACTRBL

Description

OM group Attendant Console Trouble (ACTRBL) counts problems encountered by an attendant console that are not severe enough to take down the console. These problems can occur during normal console operation or system audits.

The registers in ACTRBL track attendant console problems. The following table lists of the registers and the reasons for register increases.

Register	Reason for Register Increases
ACTRCARF	A carrier failure occurred between the console and the digital modem (DM).
ACTRCC	Problem message occurred on a circuit associated with the console.
ACTRCLFR	Call is lost due to removal of console from service.
ACTRCNR	The console did not send a response during a system audit.
ACTRCTAL	Removal of the circuit associated with the console.
ACTRDMFL	Console has received a wrong message from the DM.
ACTRINKY	Console sent an incorrect key code to the DM.
ACTRINLO	Console circuit lost integrity.
ACTRPFO	Hardware parity, framing, or overrun error occurred on the DM to attendant console link.
ACTRRES	Console hardware reset occurred.
ACTRSERR	Software error occurred, by the error did not take down the console.

Register	Reason for Register Increases
ACTRSLFT	The loss of a console call because of suicide or trap.
ACTRSYS	An error occurred that is not counted in any other ACTRBL OM group register.

When registers ACTRCARF, ACTRCC, ACTRCTRL, ACTRDMFL, ACTRINKY, ACTRINLO, ACTRPFO, ACTRRES, and ACTRSYS increase, a common internal counter also increases. The common internal counter sums the total number of problems for these registers between system audits.

If the number of errors exceeds the value set by office parameter AC_MAX_NUM_ERRORS in table OFCSTD, the following actions occur:

- the system removes the console from service
- the correct register in OM group ACTAKEDN increases instead of a register in OM group ACTRBL

The following table lists the key and info fields associated with OM group ACSYSTR.

Key field	Info field
The common language location identifier (CLLI) for the attendant console that is defined in table ATTCONS. The maximum number of key fields is 255.	None

Table ATTCONS contains the data used to assign an attendant console to a customer group. Field CONSOLE is the CLLI assigned to the attendant console that serves as the ACTRBL key field.

Office parameter AC_MAX_NUM_ERRORS specifies the maximum number of hardware-related errors an attendant console (AC) can sustain during an audit interval.

If the number of errors exceeds the value of AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- the correct register in the ACTAKEDN OM group increases instead of a register in the ACTRBL OM group

Related functional groups

The following functional groups are associated with OM group ACTRBL:

- Meridian Digital Centrex
- Meridian I (options 111-211)

Registers

The following table lists the registers associated with OM group ACTRBL and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ACTRBL

Register name	Measures
ACTRCARF	Attendant console trouble—carrier failure
ACTRCC	Attendant console trouble—circuit confusion
ACTRCLFR	Attendant console trouble—call lost from release
ACTRCNR	Attendant console trouble—no response
ACTRCTRL	Attendant console trouble—circuit released
ACTRDMFL	Attendant console trouble—digital modem message failure
ACTRINKY	Attendant console trouble—invalid key code
ACTRINLO	Attendant console trouble—integrity lost
ACTRPFO	Attendant console trouble—parity, framing, or overrun error
ACTRRES	Attendant console trouble—console reset
ACTRSERR	Attendant console trouble—console software failure
ACTRSFLT	Attendant console trouble—suicide failure or trap
ACTRSYS	Attendant console trouble—system error

ACTRCARF

Register type
Peg

Description
ACTRCARF increases when a DM no longer receives carrier information from the AC.

When register ACTRCARF increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- the ACTAKEDN_ACTDCARF register increases instead of register ACTCARF

Associated registers
ACTAKEDN_ACTDCARF, which increases when a carrier failure causes the system to remove the AC from service. The system removes the console from service because the number of errors exceeds the threshold for hardware-related errors set by office parameter AC_MAX_NUM_ERRORS.

Extension registers
None

Associated logs
IBN101

ACTRCC

Register type
Peg

Description
ACTRCC increases when a confusion message occurs. The confusion message occurs on a circuit that associates with an attendant console during normal console operation. If a confusion message occurs at the source or destination, the source or destination becomes idle. The console loses that party, but the console stays up. If confusion messages occur at other connections, the software attempts to recover.

When register ACTRCC increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- the ACTDCC in OM group ACTAKEDN increases instead of register ACTCARF

Associated registers
ACTDCC in OM group ACTAKEDN increases when:

- a messaging or data difference from a peripheral module for an attendant console causes an error
- the number of errors exceeds the threshold for hardware-related errors set by office parameter AC_MAX_NUM_ERRORS
- the system removes the AC from service

Extension registers
None

Associated logs
IBN101

ACTRCLFR

Register type
Peg

Description
ACTRCLFR counts every time a call is lost when the system removes an AC from service. When the system removes the console from service, the register in OM group ACTAKEDN increases. This register corresponds to the reason that the system removed the console from service.

Associated registers
The correct register in OM group ACTAKEDN increases.

Extension registers
None

Associated logs
IBN101

ACTRCNR

Register type
Peg

Description
ACTRCNR increases when the AC does not respond to a system audit.

Associated registers
ACTAKEDN_ACTDCNR, which increases when a system audit removes an AC from service because the console did not respond.

Extension registers
None

Associated logs
IBN101

ACTRCTRL

Register type
Peg

Description
ACTRCTRL increases when the system removes a circuit associated with an AC from service during normal console operation.

The system removes the circuit from service when one of the following actions occur:

- a circuit is force-released from a MAP terminal
- you or the system takes down the peripheral module

ACTRCTRL only increases if the system removes the circuit from service at the source or destination. Any other occurrence increases the correct register in OM group ACTAKEDN.

When register ACTRCTRL increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits. If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the system removes the console from service. Register ACTDCARF in OM group ACTAKEDN increases instead of ACTRCARF.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDCARF in OM group ACTAKEDN increases instead of register ACTRCARF

Associated registers
ACTDCTRL in OM group ACTAKEDN, which increases when:

- the system removes a circuit associated with an AC from service
- the number of errors exceeds the threshold for hardware-related errors set by office parameter AC_MAX_NUM_ERRORS
- the system removes a circuit associated with an attendant console

Extension registers
None

Associated logs
IBN101

ACTRDMFL

Register type
Peg

Description
ACTRDMFL increases when the AC receives a wrong message from the DM.

When register ACTRDMFL increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDDMFL in OM group ACTAKEDN increases instead of register ACTRDMFL

Associated registers
ACTDDMFL in OM group ACTAKEDN, which increases when the system receives a wrong message from the DM. This message causes the system to remove the AC from service. The system removes the console from service because the number of errors exceeds the

threshold for hardware-related errors. The office parameter AC_MAX_NUM_ERRORS sets the threshold.

Extension registers
None

Associated logs
IBN101

ACTRINKY

Register type
Peg

Description
ACTRINKY counts each time the AC sends an incorrect key code to the DM.

When register ACTRINKY increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits. If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the system removes the console from service.

ACTDINKY in OM group ACTAKEDN increases instead of ACTRINKY.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDDMFL in OM group ACTAKEDN increases instead of register ACTRDMFL

Associated registers
ACTDINKY in OM group ACTAKEDN, which increases when a wrong key code on the DM-to-AC link causes the system to remove the AC from service. The system removes the AC from service because the number of errors exceeds the threshold for hardware-related errors. The office parameter AC_MAX_NUM_ERRORS sets the threshold.

Extension registers
None

Associated logs
IBN101

ACTRINLO

Register type
Peg

Description
ACTRINLO counts integrity failure on circuits associated with an AC during normal console operation. If the failure occurs at source or destination, the source or destination is released. For other occurrences, the software attempts to recover.

When register ACTRINLO increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDINLO in OM group ACTAKEDN increases instead of register ACTRINLO

Associated registers
ACTDINLO in OM group ACTAKEDN, which increases when an integrity loss on a circuit associated with an AC causes the system to remove the console from service. The system removes the console from service because the number of errors exceeds the threshold for hardware-related errors set by office parameter AC_MAX_NUM_ERRORS.

Extension registers
None

Associated logs
IBN101

ACTRPFO

Register type
Peg

Description
ACTRPFO counts hardware parity, framing, or overrun errors. These errors occur on a DM-to-AC link.

When register ACTRPFO increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDPFO in OM group ACTAKEDN increases instead of register ACTRPFO

Associated registers
ACTDPFO in OM group ACTAKEDN, which increases when a hardware parity, framing, or overrun error on the DM-to-AC link causes the system to remove an AC from service. The system removes the AC from service because the number of errors exceeds the threshold for hardware-related errors. The office parameter AC_MAX_NUM_ERRORS sets the threshold.

Extension registers
None

Associated logs
IBN101

ACTRRES

Register type
Peg

Description
ACTRRES counts hardware resets for an AC. Reasons for a reset include a local power failure, or a carrier failure from the central control to the AC.

When register ACTRRES increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDRES in OM group ACTAKEDN increases instead of register ACTRRES

Associated registers
ACTDRES in OM group ACTAKEDN, which increases when a hardware reset on an AC causes the system to remove the console from service. The system removes the console from service because the number of errors exceeds the threshold for hardware-related errors set by office parameter AC_MAX_NUM_ERRORS.

Extension registers
None

Associated logs
IBN101

ACTRSERR

Register type
Peg

Description
ACTRSERR counts software errors on an AC that are not severe enough to take down the console.

Associated registers
ACTDSERR in OM group ACTAKEDN, which increases when a software error removes the console from service

Extension registers
None

Associated logs
IBN101

ACTRSFLT

Register type
Peg

Description
ACTRSFLT counts calls that are lost on an AC as a result of call suicide or trapped calls.

Associated registers
None

Extension registers
None

Associated logs
IBN101

ACTRSYS

Register type
Peg

Description
ACTRSYS counts errors that are not increased in any other register in OM group ACTRBL.

When register ACTRSYS increases, a common internal counter also increases. The common internal counter sums the total number of hardware-related errors for several registers between system audits. If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the system removes the console from service. Register ACTDSYS in OM group ACTAKEDN increases instead of ACTRSYS.

If the number of errors exceeds the threshold set by office parameter AC_MAX_NUM_ERRORS, the following actions occur:

- the system removes the console from service
- ACTDSYS in OM group ACTAKEDN increases instead of register ACTRSYS

Associated registers
ACTDSYS in OM group ACTAKEDN

Extension registers
None

Associated logs
IBN101

ADASAPU

Description

OM group Automated Directory Assistance Service Application Processing Unit (ADASAPU) records call processing statistics for the Automated Directory Assistance Service (ADAS) application that runs on the application processing unit (APU).

In TOPS07, the prompt talkover feature adds two new registers, TLKOVR1 and TLKOVR2, to ADASAPU. These registers track occurrences of talkover during the play out of the locality and listing prompts. TLKOVR1 records the number of occurrences of talkover during the play out of the first prompt (locality prompt). TLKOVR2 records the number of occurrences of talkover during the play out of the second prompt (listing prompt).

Note: The standard ADAS call model orders prompting such that the subscriber is first prompted for locality and then listing information; however, individual operating companies can reverse the prompting order.

The following table lists the key and info fields associated with OM group ADASAPU.

Key field	Info field
ADASAPUX_OM_KEY	None

Related functional group

Functional group AVPU0001 is associated with OM group ADASAPU.

Registers

The following table lists the registers associated with OM group ADASAPU and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ADASAPU (Sheet 1 of 2)

Register name	Measures
BARGEIN	Barge-In
DTMFFAIL	Dual-tone multifrequency failure

Registers for OM group ADASAPU (Sheet 2 of 2)

Register name	Measures
INVPR1	Invalid dual-tone multifrequency key hits during first prompt
INVPR2	Invalid dual-tone multifrequency key hits during second prompt
RECFAIL	Record failure
SETNFAIL	Set noise failure
SILENR1	Silent reprompt during first recording
SILENR2	Silent reprompt during second recording
TLKOVR1	Talkover during first prompt
TLKOVR2	Talkover during second prompt
TLONGR1	Too-long reprompt during first recording
TLONGR2	Too-long reprompt during second recording
TOTDTZ	Total dual-tone multifrequency zeroes
TOTHFL	Total hookswitch flashes
TOTINVD	Total invalid dual-tone multifrequency digits
TSOONR1	Too-soon response to first prompt
TSOONR2	Too-soon response to second prompt

BARGEIN

Register type
Peg

Description
The DMS switch pegs register BARGEIN each time an ADAS call successfully records a locality and listing and is attached to an operator who uses Barge-In to abort the ADAS playback.

Associated registers
None

Extension registers
None

Associated logs
None

DTMFFAIL

Register type
Peg

Description
The DMS switch pegs register DTMFFAIL each time an ADAS call fails because the caller enters too many invalid dual-tone multifrequency (DTMF) key hits (1-9, *, #). The number of invalid DTMF keys hits tolerated is set by a datafillable parameter, MAXIMUM_DTMF_ATTEMPTS (set on the ADAS Operation Administration and Maintenance [OAM] workstation).

Note: The "#" is only invalid when the skip prompts and messages option is disabled.

Associated registers
None

Extension registers
None

Associated logs
None

INVPR1

Register type
Peg

Description
The DMS switch pegs register INVPR1 each time the caller enters an invalid DTMF key hit during the playing of the first prompt.

Associated registers
None

Extension registers
None

Associated logs
None

INVPR2

Register type
Peg

Description
The DMS switch pegs register INVPR2 each time the caller enters an invalid DTMF key hit during the playing of the second prompt.

Associated registers
None

Extension registers
None

Associated logs
None

RECFAIL

Register type
Peg

Description
The DMS switch pegs register RECFAIL each time an ADAS call fails because of too many recording failures. The failures that cause the DMS switch to peg this register are as follows:

- The caller speaks too soon.
- The caller speaks too long
- The call does not speak at all.

The number of invalid recording errors that are tolerated is set by a datafillable parameter, MAXIMUM_RECORD_ATTEMPTS. Register RECFAIL is not incremented when the datafillable parameter CONTINUE_ON_RECORDING_ERROR is enabled.

Note: These parameters are set on the ADAS OAM workstation.

Associated registers
None

Extension registers
None

Associated logs
None

SETNFAIL

Register type
Peg

Description
The DMS switch pegs register SETNFAIL each time the set noise failure threshold is exceeded for an ADAS call. Register SETNFAIL is only incremented when the datafillable parameter, CONTINUE_ON_NOISE_FLOOR_ERROR, (set on the ADAS OAM workstation) is enabled.

Between the playing of the introductory message and the playing of the first prompt, the background noise level of the voice channel is measured to establish the set noise floor threshold. This measure enables the voice recognition system to distinguish the voice noise level from the background noise level and record only the spoken responses. Set noise failure occurs if increases in background noise (noise floor) exceed the set noise failure threshold.

Note: This parameter is set on the ADAS OAM workstation.

Associated registers
None

Extension registers
None

Associated logs
None

SILENR1

Register type
Peg

Description
The DMS switch pegs register SILENR1 each time a reprompt plays because the caller was silent in response to the first prompt.

Associated registers
None

Extension registers
None

Associated logs
None

SILENR2

Register type
Peg

Description
The DMS switch pegs register SILENR2 each time a reprompt plays because the caller was silent in response to the second prompt.

Associated registers
None

Extension registers
None

Associated logs
None

TLKOVR1

Register type
Peg

Description
The DMS switch pegs register TLKOVR1 each time the caller terminates the play-out of the first prompt by speaking before the prompt completes.

Associated registers
None

Extension registers
None

Associated logs
None

TLKOVR2

Register type
Peg

Description
The DMS switch pegs register TLKOVR2 each time the caller terminates the play-out of the second prompt by speaking before the prompt completes.

Associated registers
None

Extension registers
None

Associated logs
None

TLONGR1

Register type
Peg

Description
The DMS switch pegs register TLONGR1 each time a reprompt plays because the caller spoke too long in response to the first prompt.

Associated registers
None

Extension registers
None

Associated logs
None

TLONGR2

Register type
Peg

Description
The DMS switch pegs register TLONGR2 each time a reprompt plays because the caller spoke too long in response to the second prompt.

Associated registers
None

Extension registers
None

Associated logs
None

TOTDTZ

Register type
Peg

Description
The DMS switch pegs register TOTDTZ to track the total number of callers that enter “0" (to speak to an operator) for all ADAS calls.

Associated registers
None

Extension registers
None

Associated logs
None

TOTHFL

Register type
Peg

Description
The DMS switch pegs register TOTHFL to track the total number of callers that perform hookswitch flashes (to speak to an operator) for all ADAS calls.

Associated registers
None

Extension registers
None

Associated logs
None

TOTINVD

Register type
Peg

Description
The DMS switch pegs register TOTINVD to track the total number of invalid DTMF key hits that occur for all ADAS calls.

Associated registers
None

Extension registers
None

Associated logs
None

TSOONR1

Register type
Peg

Description
The DMS switch pegs register TSOONR1 each time a reprompt plays because the caller spoke too soon in response to the first prompt.

Associated registers
None

Extension registers
None

Associated logs
None

TSOONR2

Register type
Peg

Description
The DMS switch pegs register TSOONR2 each time a reprompt plays because the caller spoke too soon in response to the second prompt.

Associated registers
None

Extension registers
None

Associated logs
None

ADASDSGN

Description

OM group Automated Directory Assistance System Design (ADASDSGN) registers track the internal operations of the call processing engine (CPE).

The following table lists the key and info fields associated with OM group ADASDSGN.

Key field	Info field
None	None

Related functional groups

The OSDA Directory Assistance functional group is associated with OM group ADASDSGN.

Registers

The following table lists the registers associated with OM group ADASDSGN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ADASDSGN

Register name	Measures
SDCMERR	Send computing module error
SDVPUERR	Send voice processing error
UNKNMSG	Unknown call message
DSCRDMSG	Discarded messages
AUDCBRST	Audit call data block reset

SDCMERR

Register type
Peg

Description
SDCMERR counts the number of messages that could not be sent to the computing module due to a communications error.

Associated registers
None

Extension registers
None

Associated logs
None

SDVPUERR

Register type
Peg

Description
SDVPUERR counts the number of messages that could not be sent to the VPU due to a communications error.

Associated registers
None

Extension registers
None

Associated logs
None

UNKNMSG

Register type
Peg

Description
UNKNMSG counts the number of messages received by a CPE that could not be mapped to a call instance currently being handled by the CPE.

Associated registers
None

Extension registers
None

Associated logs
UCPE301

DSCRDMSG

Register type
Peg

Description
DSCRDMSG counts the number of messages that were discarded because they were not a response to the latest VPU request.

Associated registers
None

Extension registers
None

Associated logs
UCPE302

AUDCBRST

Register type
Peg

Description
AUDCBRST counts the number of times a call data block was reset because it exceeded the maximum number of audits allowed.

Associated registers
None

Extension registers
None

Associated logs
None

ADASSRV

Description

Automated Directory Assistance Service (ADASSRV) provides operational measurements (OMs) for Automated Directory Assistance Service (ADAS). These measurements indicate how effectively ADAS reduces subscriber and operator time.

The following table lists the key and info fields associated with OM group ADASSRV.

Key field	Info field
None	None

Related functional groups

ADAS is associated with OM group ADASSRV.

Registers

The following table lists the registers associated with OM group ADASSRV and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ADASSRV

Register name	Measures
ADASFTIM	ADAS failed call times
ADASLS	ADAS listing collected successfully
ADASLU	ADAS listing collected unsuccessfully
ADASOHV	ADAS call goes on-hook while at voice service node
ADASOPV	ADAS calls to operator for playback by the voice service node
ADASOTIM	ADAS operator to voice service node playback call times
ADASSTIM	ADAS subscriber-VSN successful call time

ADASFTIM

Register type
Peg

Description
ADASFTIM records the accumulated caller time (in seconds) for calls that are queued to an operator because the caller failed to record the audio responses for listing and locality. ADASFTIM is used in conjunction with registers ADASLU and ADASOHV to determine the average time from start of ADAS processing until the call is queued to an operator.

Associated registers
ADASOHV, ADASLU

Validation formula
ADASFTIM / (ADASLU + ADASOHV) = average time for failed calls (in seconds)

Extension registers
ADASFTM2

Associated logs
None

ADASLS

Register type
Peg

Description
ADASLS is incremented each time a call is made for which the VSN requests an operator following successful collection of the locality and listing information from the caller. This register is incremented every time register ADASSTIM is incremented. ADASLS is used in conjunction with register ADASSTIM to determine the average caller time elapsed before calls are queued for an operator.

Associated registers
ADASSTIM

Validation formula
ADASSTIM / ADASLS = average time for successful calls (in seconds)

Extension registers
None

Associated logs
None

ADASLU

Register type
Peg

Description
ADASLU is incremented each time a call is made for which the VSN requests an operator following unsuccessful collection of the locality and listing information from the caller. When this register is incremented, register ADASFTIM is also incremented. ADASLU is used in conjunction with register ADASOHV to determine the average time elapsed before calls are queued to an operator (or calls end) for calls that have not collected audio responses from the caller.

Associated registers
ADASFTIM, ADASOHV

Validation formula
ADASFTIM / (ADASLU + ADASOHV) = average time for failed calls (in seconds)

Extension registers
None

Associated logs
None

ADASOHV

Register type
Peg

Description
ADASOHV is incremented each time a call goes on-hook while at the VSN. When this register is incremented, register ADASFTIM is also incremented. ADASOHV is used in conjunction with register ADASLU to determine the average caller time elapsed before calls are either ended or queued to an operator because locality and listing information was not collected from the caller.

Associated registers
ADASFTIM, ADASLU

Validation formula
ADASFTIM / (ADASLU + ADASOHV) = average time for failed calls (in seconds)

Extension registers
None

Associated logs
None

ADASOPV

Register type
Peg

Description
ADASOPV is incremented each time an ADAS call obtains an operator and connects successfully to the VSN for playback to the operator of the caller's recorded locality and listing information. This register is incremented every time register ADASOTIM is incremented. ADASOPV is used in conjunction with ADASOTIM to determine the average playback time of the VSN to the operator.

Associated registers
ADASOTIM

Validation formula
ADASOTIM /ADASOPH = average playback time for a call (in seconds)

Extension registers
None

Associated logs
None

ADASOTIM

Register type
Peg

Description
ADASOTIM records accumulated playback time (in seconds) of locality and listing information for calls that successfully obtain an operator who receives playback from the VSN. ADASOTIM is used in conjunction with ADASOPV to determine the average playback time to the operator.

Associated registers
ADASOPV

Validation formula
ADASOTIM /ADASOPH = average playback time for a call (in seconds)

Extension registers
ADASOTM2

Associated logs
None

ADASSTIM

Register type
Peg

Description
ADASSTIM records the caller time (in seconds) to record the locality and listing information successfully and to be connected to an operator by the VSN. ADASSTIM is used in conjunction with register ADASLS to determine the average elapsed time from start of ADAS processing until the call is queued to an operator.

Associated registers
ADASLS

Validation formula
ADASSTIM / ADASLS = average time for successful call (in seconds)

Extension registers
ADASSTM2

Associated logs
None

AIN

Description

OM group Advanced Intelligent Network (AIN) is the platform for (AIN) traffic and maintenance measurements.

The following table lists the key and info fields associated with OM group AIN.

Key field	Info field
AIN_MSGSET is the AIN application identifier for a call. This OM group enables increments for R01 and R02 messages. INAPV8 is the key field for CS-IR on the DMS-SSP. This OM group enables increments for CS-IR calls.	None

Related functional groups

There are no functional groups associated with OM group AIN.

Registers

The following table lists the registers associated with OM group AIN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AIN (Sheet 1 of 2)

Register name	Measures
AINCALL	AIN calls
AMACONV	Automatic message accounting conversation
AMAMAX	Automatic message accounting maximum
AMASLPID	Automatic message accounting slpID
CIOVFAFQ	Component identification overflow after the first AIN query

Registers for OM group AIN (Sheet 2 of 2)

Register name	Measures
CIOVFBFQ	Component identification overflow before the first AIN query
CPFLAFQ	AIN call processing failure after the first query for AIN calls
CPFLBFQ	AIN call processing before the first query for AIN calls
INTROFF	AIN share interoffice trunk triggers
INTROFF2	AIN share interoffice trunk triggers
INVCMDMG	Invalid command message for AIN calls
INVCMDSE	Invalid command sequence for AIN calls
MAXQEXCD	Maximum number of AIN queries exceeded for an AIN call
RSPTMOUT	SSP time-out awaiting SCP response on an AIN or CS-IR query
TIOVFAFQ	Transaction identification overflow or wrong after the first AIN query
TIOVFBFQ	Transaction identification overflow or wrong before the first AIN query
TRIG	AIN triggers
TRIG2	AIN triggers 2

AINCALL

Register type
Peg

Description
AINCALL counts the number of AIN calls that occur. An AIN call is defined as any call which triggers at least once.

For AIN Essentials and Service Enablers, the register AINCALL increments when the first AIN Essentials and Service Enablers trigger for a given call is encountered and all criteria is met. When more than one trigger is satisfied for a given call, no consideration is given to

subsequent triggers. Calls that fail after the trigger criteria is met count as AIN calls. A call that encounters switch-based call forwarding is considered as one call. A call that escapes from the trigger is not an AIN call.

Associated registers
TRIG, TRIG2

Extension registers
AINCALL2

Associated logs
None

AMACONV

Register type
Peg

Description
AMACONV increases any time an automatic message accounting (AMA) parameter arrives at the service switching point (SSP). For (AMACONV) to increase, the AMA must arrive at the SSP in a conversation package from the off-board processor.

Associated registers
None

Extension registers
None

Associated logs
None

AMAMAX

Register type
Peg

Description
AMAMAX increases when the maximum AMA parameters allowed for a single AMA record are exceeded. The system defines AIN release 0.1 AMA maximum as follows:

- the maximum number of AMAslpID parameters equals the setting of office parameter AIN_MAX_SERIAL_TRIGGERS
- 6 AMADigitsDialedWC
- 2 AMALineNumber
- 1 AMABusinessCustomerID
- 1 AMAAlternateBillingNumber

Associated registers
None

Extension registers
None

Associated logs
None

AMASLPID

Register type
Peg

Description
AMASLPID increases when any automatic message accounting (AMA) parameter arrives at the SSP. For (AMASLPID) to increase, the AMA must arrive in an off-board processor response message before an AMAslpID parameter is received.

Associated registers
None

Extension registers
None

Associated logs
None

CIOVFAFQ

Register type
Peg

Description
CIOVFAFQ counts the number of AIN calls that fail. AIN calls can fail after the system sends the first AIN query. The first AIN query is not received because the invoke identification is not available for the invoke component. CIOVFAFQ counts AIN calls that fail in this way. This overflow occurs after the use of all invoke identifications assigned to the AIN application(s) in the table TCAPTRID.

For R01 and R02, register CIOVFAFQ increases when an AIN release 0.1 call fails after the system sends the first AIN query. Failure can occur with the use of all the invoke identification names assigned to AIN in table TCAPTRID.

Associated registers
None

Extension registers
None

Associated logs
None

CIOVFBFQ

Register type
Peg

Description
CIOVFBFQ counts the number of AIN calls that fail because an invoke identification for the invoke component is not available. Register (CIOVFBFQ) only counts calls that fail before the system sends the first AIN query. This failure occurs because of the use of all the invoke identification names assigned to the AIN application(s) in the table TCAPTRID.

For R01 and R02, register CIOVFBFQ increases when an AIN release 0.1 call fails because of the use of all of the invoke identification names assigned to AIN in table TCAPTRID. The calls must fail before the system sends the first query for CIOVFBFQ to increase.

Associated registers
None

Extension registers
None

Associated logs
None

CPFLAFQ

Register type
Peg

Description
CPFLAFQ counts AIN calls that fail when an SSP is offline because of a hardware or software initialization. Register (CPFLAFQ) also counts calls that fail because of a failure in the AIN call processing routine. Register (CPFLAFQ) only counts this failure after the system sends the first AIN query.

Call failures already counted by register INVCMDMG and INVCMDSE are not counted in CPFLAFQ.

For AIN release 0.1 calls, the R01 and R02 registers of CPFLAFQ are increased when an AIN release 0.1 call fails. The registers only count failures that occur after the system sends the first query to the service control point (SCP). The registers count failures that occur for one of the following reasons:

- AIN release 0.1 subsystem is out of service
- The system receives a CONTINUE message from the SCP. More triggers at the INFO_ANALYZED trigger detection point are not present, but enough information to continue normal routing is not present.

Associated registers
None

Extension registers
None

Associated logs
None

CPFLBFQ

Register type
Peg

Description
CPFLBFQ counts AIN calls that fail. Failures that occur when the system terminates an SSP because of a hardware or software initialization. Failures that occur because of a failure in the AIN call processing routine. Failures that occur before the system sends the first AIN query message. The system sends the AIN query message to the SS7 transport link to be passed to the SCP.

For AIN release 0.1 calls, the R01 and R02 registers increase when an AIN release 0.1 call fails. The registers only count failures that occur before the first query goes to the SCP for one of the following reasons:

- the system detects an AIN release 0.1 subsystem out-of-service failure before the system sends the query to the SS7 transport link
- the system can not build the AIN required parameter BEARER_CAPABILITY. The system can not build BEARER_CAPABILITY because the system can not map the incoming BEARER_CAPABILITY parameter to the correct AIN BEARER_CAPABILITY parameter.
- the system has not fulfilled requirements associated with the requested digit-collection format. This results in a call take-down during pre-query digit collection

Associated registers
None

Extension registers
None

Associated logs
None

INTROFF

Register type
Peg

Description
INTROFF counts the number of AIN share interoffice trunk triggers to accumulate the number of shared interoffice trunk calls.

For AIN release 0.1 calls, only the R01 and R02 registers INTROFF increase. The registers increase when a call triggered the share interoffice trunk trigger.

Associated registers
None

Extension registers
INTROFF2

Associated logs
None

INTROFF2

Register type
Peg

Description
AIN share interoffice trunk triggers 2 is an overflow register for register INTROFF.

Associated registers
INTROFF

Extension registers
None

Associated logs
None

INVCMDMG

Register type
Peg

Description
INVCMDMG counts calls that fail. The register counts failure that occurs because the SSP receives a response from the SCP. The system cannot decipher the response, or the response has bad data.

For AIN release 0.1 calls, the R01 and R02 registers INVCMDMG increases. Registers increase when the SSP receives an AIN release 0.1 message from the SCP that contains one of the following errors:

- unrecognized correlation ID
- unrecognized operation code
- missing required parameters
- missing conditional parameters
- not planned parameter sequence
- not planned communication
- not planned message
- wrong data value
- wrong parameters

Associated registers
None

Extension registers
None

Associated logs
None

INVCMDSE

Register type
Peg

Description
INVCMDSE counts calls that fail. Failures that occur because the SSP receives a response from the SCP that contains not complete or out-of-sequence commands.

For AIN release 0.1 calls, the R01 and R02 registers INVCMDSE increase. Registers increase when the SSP receives an not planned AIN release 0.1 message sequence.

Associated registers
None

Extension registers
None

Associated logs
None

MAXQEXCD

Register type
Peg

Description
MAXQEXCD counts the number of AIN calls that fail because the limit on the number of AIN queries is exceeded.

For AIN release 0.1 calls, register MAXQEXCD increments when an AIN release 0.1 call fails because the limit on the number of AIN release 0.1 queries is exceeded.

Office parameter AIN_MAX_SERIAL_TRIGGERS in table OFCENG determines the number of times that an AIN release 0.1 call triggers without being routed out of the SSP. The default value for this parameter is 6.

CS-1R calls can trigger once.

Associated registers
None

Extension registers
None

Associated logs
None

RSPTMOUT

Register type
Peg

Description
RSPTMOUT counts the number of calls that fail because a reply is not sent to the SSP from the SCP within the time interval specified by one of the following office parameters:

- AIN_TI_TIMER
- INAP_TSSF_WFI_TIMER

For AIN release 0.1 calls, the R01 and R02 registers RSPTMOUT are incremented when a reply in response to an AIN release 0.1 query is not sent to the SSP from the SCP within the interval defined by AIN_T1_TIMER.

Associated registers
None

Extension registers
None

Associated logs
None

TIOVFAFQ

Register type
Peg

Description
TIOVFAFQ counts AIN calls that fail. The register counts the failures that occur because the transaction identification is not available in the SSP. The transaction identification must not be available after the system sends the first AIN or CS-IR query for the register to increase.

Office parameter MAX_NO_OF_TRANS_ID in table OFCENG defines the total number of transaction identification names available to the

SSP. The system uses the parameter to allocate transaction identification names available to the SSP for launching database queries to a SCP. Enter the number of transaction identification names for AIN in table TCAPTRID.

Note: Table TCAPTRID is obsolete. See Data Schema Reference Manual for details.

For AIN release 0.1 calls, the R01 and R02 registers TIOVFAFQ increase. Registers increase when an AIN release 0.1 call fails because the transaction identification is not available in the SSP. The register counts only failures that occur after the system sends the first query.

Associated registers
None

Extension registers
None

Associated logs
None

TIOVFBFQ

Register type
Peg

Description
TIOVFBFQ counts AIN calls that fail because the transaction identification is not available in the SSP. For the register to increase the failure must occur before the system sends the first AIN query.

Office parameter MAX_NO_OF_TRANS_ID in table OFCENG defines the total number of transaction identification names available to the SSP. Transaction identification names available to the SSP for launching database queries to a SCP database. The number of transaction identification names allocated for AIN can be entered in table TCAPTRID.

Note: Table TCAPTRID is obsolete. See Data Schema Reference Manual for details.

For AIN release 0.1 calls, the R01 and R02 registers TIOVFBFQ increase. Registers increase when an AIN release 0.1 call fails because the transaction identification is not available in the SSP. The register counts only failures that occur before the system sends the first query to the SCP.

Associated registers
None

Extension registers
None

Associated logs
None

TRIG

Register type
Peg

Description
TRIG counts the number of AIN or CS-IR triggers that occur.

For AIN release 0.1, the R01 and R02 registers TRIG increase when:

- the system encounters an AIN 0.1 subscribed trigger (that includes the share interoffice trunk trigger).
- the system meets all the requirements of the subscribed trigger
- the system correctly initiates the IN feature

The system provides a second register (TRIG2) because of the potentially large number of increments to this register.

Associated registers
TRIG2

Extension registers
None

Associated logs
None

TRIG2

Register type
Peg

Description
TRIG2 is an overflow register for register TRIG.

Associated registers
TRIG

Extension registers
None

Associated logs
None

AINACG

Description

OM group Advanced Intelligent Network (AIN) Automatic Code Gapping (AINACG) provides operational measurements for the automatic code gapping (ACG) feature in the SSP. It is used to monitor the blocking of AIN R0.1 queries by ACG, ACG control list overflows, and changes that are made to ACG control lists.

The following table lists the key and info fields associated with OM group AINACG.

Key field	Info field
None	None

Related functional groups

AIN Call Model Control (AIN00007) functional group is associated with OM group AINACG.

Registers

The following table lists the registers associated with OM group AINACG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AINACG

Register name	Measures
BLKCASCP	Blocked call/query due to SCP overload controls
BLKCASMS	Blocked call/query due to SMS initiated controls
CTRLCHA	Control list changes
SCPOVLDO	SCP overload list overflow
SMSOVLDO	SMS overload list overflow

BLKCASCP

Register type
Peg

Description
BLKCASCP counts the number of AIN calls that are blocked by AIN ACG SCP overload control and are sent to either AIN default routing or AIN final treatment.

Associated registers
None

Extension registers
None

Associated logs
None

BLKCASMS

Register type
Peg

Description
BLKCASMS counts the number of AIN calls that are blocked by AIN ACG SMS originated code control and are sent to either AIN default routing or AIN final treatment.

Associated registers
None

Extension registers
None

Associated logs
None

CTRLCHA

Register type
Peg

Description
CTRLCHA counts the number of times the following events occur:

- an AIN ACG item is added to the service control point (SCP) overload control list
- an AIN ACG item is added to the service management system (SMS) originated control list
- an existing control item in either list is replaced or removed

> ***Note:*** When a control item is removed from the SCP or SMS control list using ACG restore functionality, it is not reflected in the CTRLCHA register.

Associated registers
None

Extension registers
None

Associated logs
AIN610

SCPOVLDO

Register type
Peg

Description
SCPOVLDO counts the number of times that no more ACG control items can be added to the AIN ACG SCP overload control list because the list is full.

Associated registers
None

Extension registers
None

Associated logs
AIN300

SMSOVLDO

Register type
Peg

Description
SMSOVLDO counts the number of times that no more ACG control items can be added to the AIN ACG SCP overload control list because the list is full.

Associated registers
None

Extension registers
None

Associated logs
AIN301

AINICOFF

Description

OM group Advanced Intelligent Networks Incoming Office-based (AINICOFF) counts AIN Service Enablers office-based messages that the service control point (SCP) sends to the service switching point (SSP). OM group AINICOFF monitors the incoming traffic to the SSP.

When different triggers or events cause the SSP to send a message, a separate OM register provides a count for each trigger and event type. OM registers increment when the system correctly sends or receives the message that corresponds to that register. The system correctly sends a message when the message is encoded into the transaction capability application part (TCAP) protocol. The system correctly receives a message when the system decodes the message from the TCAP protocol.

To decode a TCAP message involves several stages of error checking. The system counts messages after the decoding of message parameters or when errors are present in the message parameters. The system does not count a message when the system detects an error in the TCAP package or component.

The following errors that can occur in the TCAP package or component:

- all fatal protocol errors
- errors as a result of a bad group of messages, packages, or components types
- an invalid response message
- bad correlation identifiers
- duplicated messages

OM group AINICOFF contains registers that count call-related, incoming, office-based, Service Enablers messages. The system counts messages entered as R02 in tables TRIGDIG, TRIGITM, or TRIGINFO.

Operating company personnel can subscribe to the following office-based triggers:

- Specific_Digit_String
- N11

The following table lists the key and info fields associated with OM group AINICOFF.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group AINICOFF.

Registers

The following table lists the registers associated with OM group AINICOFF and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AINICOFF (Sheet 1 of 2)

Register name	Measures
IOAR	IO Analyze_Route
IOCON	IO Continue
IOCTR	IO Connect_To_Resource
IODISC	IO Disconnect
IOSTR	IO Send_To_Resource
IOCRE	Cancel_Resource_Event
IOCITR	IO Call_Info_To_Resource
IOSN	IO Send_Notification
IORRBE	IO Request_Report_BCM_Event
IOCLOSI	IO Close

Registers for OM group AINICOFF (Sheet 2 of 2)

Register name	Measures
IOCINFO	IO Collect_Information
IOCCALL	IO Create_Call

IOAR

Register type
Peg

Description
IOAR counts the Analyze_Route messages that the SSP receives from the SCP in a transaction that an office-based message initiates.

Associated registers
ISAR, which counts the Analyze_Route messages the SSP receives from the SCP in a transaction that a line-subscribed message initiates.

Validation formula
IOAR + ISAR = total Analyze_Route messages

Extension registers
None

Associated logs
None

IOCON

Register type
Peg

Description
IOCON counts the Continue messages that the SSP receives from the SCP in a transaction that an office-based message initiates.

Associated registers
IOCON, which counts the messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Validation formula
IOCON + ISCON = total Continue messages

Extension registers
None

Associated logs
None

IOCTR

Register type
Peg

Description
IOCTR counts the incoming Connect_To_Resource messages received at the SSP from the SCP in transactions initiated by office-based messages.

Associated registers
ISCTR, which counts all the Incoming Connect_To_Resource messages and outgoing CTR_Clear messages.

Extension registers
None

Associated logs
None

IODISC

Register type
Peg

Description
IODISC counts the disconnect messages that the SSP receives from the SCP in a transaction that an office-based message initiates.

Associated registers
ISDISC, which counts the disconnect messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Validation formula
IODISC + ISDISC = total disconnect messages

Extension registers
None

Associated logs
None

IOSTR

Register type
Peg

Description
IOSTR counts the Send_To_Resource messages received at the SSP from the SCP in a transaction that an office-based message initiates.

Associated registers
The following registers are associated with IOSTR:

- ISSTR, which counts the Send_To_Resource messages that the SSP receives from the SCP in a transaction that a subscribed message initiates
- IORCLR, which counts the Resource_Clear messages sent from the SSP to the SCP in a transaction that an office-based message initiates
- ISRCLR, which counts the Resource_Clear messages sent from the SSP to the SCP in a transaction that a subscribed message initiates.
- IOCRE
- ISCRE, which counts the Cancel_Resource_Event messages that the SSP receives from the SCP in a transaction that a subscribed message initiates

Validation formulas
The following formulas relate to IOSTR and its associated registers:

- IOSTR + ISSTR = total Send_To_Resource messages
- IOCRE + ISCRE = total Cancel_Resource_Event messages

Extension registers
None

Associated logs
None

IOCRE

Register type
Peg

Description
IOCRE counts the Cancel_Resource_Event messages that the SSP receives from the SCP in a transaction that an office-based message initiates.

Associated registers
The following registers are associated with IOCRE:

- ISCRE, which counts the Send_To_Resource messages that the SSP receives from the SCP in a transaction that a subscribed message initiates
- IORCLR, which counts the Resource_Clear messages sent from the SSP to the SCP in a transaction that an office-based message initiates
- ISRCLR, which counts the Resource_Clear messages sent from the SSP to the SCP in a transaction that a subscribed message initiates
- IOSTR
- ISSTR, which counts the Send_To_Resource messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Validation formulas
The following formulas relate to IOCRE and its associated registers:

- IOCRE + ISCRE = total Cancel_Resource_Event messages
- IOSTR + ISSTR = total Send_To_Resource_Event messages

Extension registers
None

Associated logs
None

IOCITR

Register type
Peg

Description
IOCITR counts the Call_Info_To_Resource messages received at the SSP from the SCP in a transaction that an office-based message initiates.

Associated registers
The following registers are associated with IOCITR:

- ISCITR, which counts the Call_Info_To_Resource messages that the SSP receives from the SCP in a transaction that a subscribed message initiates
- IOCIFR, which counts the Call_Info_From_Resource messages sent from the SSP to the SCP in a transaction that an office-based message initiates
- ISCIFR, which counts the Call_Info_From_Resource messages sent from the SSP to the SCP in a transaction that a subscribed message initiates

Validation formula
IOCITR + ISCITR = total Call_Info_To_Resource messages

Extension registers
None

Associated logs
None

IOSN

Register type
Peg

Description
IOSN counts the Send_Notification messages received at the SSP from the SCP in a transaction that an office-based message initiates.

Associated registers
The following registers are associated with IOSN:

- ISSN, which counts the Send_Notification messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.
- IOTN, which counts the Termination_Notification messages that the SSP sends to the SCP in a transaction that an office-based message initiates
- ISTN, which counts the Termination_Notification messages that the SSP sends to the SCP in a transaction that a subscribed message initiates

Validation formula
IOSN + ISSN = total Send_Notification messages

Extension registers
None

Associated logs
None

IORRBE

Register type
Peg

Description
IORRBE counts the Request_Report_BCM_Event messages that the SSP receives from the SCP in a transaction that an office-based message initiates. Registers IORRBE + ISRRBE = total Request_Report_BCM_Event messages.

Associated registers
None

Extension registers
None

Associated logs
None

IOCLOSI

Register type
Peg

Description
IOCLOSI counts the close messages that the SSP receives from the SCP in a transaction that an office-based message initiates.

Associated registers
None

Extension registers
None

Associated logs
None

IOCINFO

Register type
Peg

Description
IOCINFO counts the Collect_Information messages received in response to an office-based trigger encounter. The register increments when the SSP correctly decodes a Collect_Info message and when AIN SOC AIN00244 is ON.

Associated registers
ISCINFO, which counts the Collect_Information messages received in response to a subscribed trigger encounter

Validation formula
IOCINFO + ISCINFO = total Collect_Information messages

Extension registers
None

Associated logs
None

IOCCALL

Register type
Peg

Description
IOCCALL counts the incoming Create_Call messages that the SSP receives from the SCP. The register increments when the SSP correctly decodes Create_Call messages and when AIN SOC AIN00271 is ON.

Associated registers
The following registers are associated with IOCCALL:

- CCTMOUT (in OM group AIN), which counts the number of times that the user rejects the Create_Call service by allowing a time-out after Create_Call gives notification to the user
- IOCLOSO (in OM group AIN), which records the number of CLOSE messages sent by Create_Call functionality in addition to CLOSE messages from other AIN applications in the SSP.

Extension registers
None

Associated logs
None

AINICSUB

Description

OM group Advanced Intelligent Network Incoming Subscription-based (AINICSUB) counts AIN Service Enablers subscription-based messages. The service control point (SCP) sends these messages to the service switching point (SSP). The system uses AINICSUB to monitor the incoming subscription traffic to the SSP.

The SSP can send messages that are the result of more than one type of trigger or event. A separate OM register provides a count for each trigger and event type. An OM register increments when the system sends or receives a message that corresponds with the register. The system sends a message correctly when the system encodes the message into the transaction capability application part (TCAP) protocol. The system receives a message when the system decodes the message from the TCAP protocol.

To decode a TCAP message involves several stages of error checking. The system counts the message after the system decodes the message parameters. The system decodes messages if errors are present in the message parameters. The system does not count a message when the system detects an error in the TCAP package or component.

Types of errors in the TCAP package or component follow:

- very important protocol errors
- errors as a result of a bad group of messages, packages or component types
- invalid response message
- bad correlation identifiers
- duplicated messages

AINICSUB contains registers that count call-related, incoming, subscribed, AIN Service Enablers messages. The registers count messages entered as R02 in tables TRIGDIG, TRIGINFO, and TRIGITM.

The system can subscribe to the following triggers by line or by group:

- Off-Hook_Immediate
- Off-Hook_Delay
- Shared_Interoffice_Trunk
- Public_Feature_Code
- Specific_Feature_Code
- Customized_Dialing_Plan
- automatic flexible routing (AFR)

  Note: An AFR trigger can be office_based or subscribed. The system counts messages sent as a result of this trigger as subscribed.

- O_Called_Party_Busy
- O_No_Answer
- Termination_Attempt
- Prefix
- T-Busy
- T_No_Answer

The following table lists the key and info fields associated with OM group AINICSUB.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group AINICSUB.

Registers

The following table lists the registers associated with OM group AINICSUB and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AINICSUB

Register name	Measures
ISAR	IS Analyze_Route
ISCINFO	Interactive Subscribed Collect_Information
ISCON	IS Continue
ISAUTHT	IS Authorize_Termination
ISCTR	Register IS Connect_To_Resource
ISFC	IS Forward_Call
ISDISC	IS Disconnect
ISSTR	IS Send_To_Resource
ISCRE	IS Cancel_Resource_Event
ISCITR	IS Call_Info_To_Resource
ISSN	IS Send_Notification
ISRRBE	IS Request_Report_BCM_Event
ISCLOSI	IS Close
ISOFRCL	Interactive, Subscribed, Offer_Call

ISAR

Register type
Peg

Description
ISAR counts analyze_route messages that the SSP receives from the SCP in a transaction that an subscribed message initiates.

Associated registers
IOAR, which counts the analyze_route messages that the SSP receives from the SCP in a transaction that an office-based message initiates.

Validation formula
ISAR + IOAR = total analyze_route messages

Extension registers
None

Associated logs
None

ISCINFO

Register type
Peg

Description
ISCINFO counts the Collect_Information messages received in response to a line-subscribed trigger encounter.

Associated registers
IOCINFO, which counts the Collect_Information messages that the SSP receives when the SSP hits an office subscribed trigger

Validation formula
ISCINFO + IOCINFO = total Collect_Information messages

Extension registers
None

Associated logs
None

ISCON

Register type
Peg

Description
ISCON counts continue messages that the SSP receives from the SCP, in a transaction that a subscribed message initiates.

Associated registers
ICOCN, which counts the continue messages that the SSP receives from the SCP in a transaction that an office-based message initiates.

Validation formula
ISCON + IOCON = total continue messages

Extension registers
None

Associated logs
None

ISAUTHT

Register type
Peg

Description
ISAUTHT counts authorize_termination messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
None

Extension registers
None

Associated logs
None

ISCTR

Register type
Peg

Description
ISCTR counts the Connect_To_Resource messages the SSP receives from the SCP in a subscribed-message initiated

Associated registers
None

Extension registers
None

Associated logs
None

ISFC

Register type
Peg

Description
ISFC counts forward_call messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
None

Extension registers
None

Associated logs
None

ISDISC

Register type
Peg

Description
ISDISC counts the disconnect messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
IODISC, which counts the disconnect messages that the SSP receives from the SCP in a transaction that an office-based message initiates

Validation formula
IODISC + ISDISC = total disconnect messages

Extension registers
None

Associated logs
None

ISSTR

Register type
Peg

Description
ISSTR counts the send_to_resource messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
The following registers are associated with ISSTR:

- IOCRE, which counts the cancel_resource_event messages that the SSP receives from the SCP in a transaction that an office-based message initiates
- IOSTR, which counts the send_to_resource messages that the SSP receives from the SCP in a transaction that an office-based message initiates.
- ISRCLR, which counts the resource_clear messages that the SSP sends to the SCP in a transaction that a subscribed message initiates
- IORCLR, which counts the resource_clear messages that the SSP sends to the SCP in a transaction that an office-based message initiates

Validation formulas
The following formulas relate to ISSTR and its associated registers:

- IOCRE + ISCRE = total cancel_resource_event messages
- IOSTR + ISSTR = total send_to_resources messages

Extension registers
None

Associated logs
None

ISCRE

Register type
Peg

Description
ISCRE counts the cancel_resource_event messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
The following registers are associated with ISCRE:

- IOCRE, which counts the cancel_resource_event messages that the SSP receives from the SCP in a transaction that an office-based message initiates
- ISSTR
- IOSTR, which counts the send_to_resource messages that the SSP receives from the SCP in a transaction that an office-based message initiates
- ISRCLR, which counts the resource_clear messages that the SSP sends to the SCP in a transaction that a subscribed message initiates
- IORCLR, which counts the resource_clear messages that the SSP sends to the SCP in a transaction that an office-based message initiates

Validation formulas
The following formulas relate to ISCRE and its associated registers:

- IOCRE + ISCRE = total cancel_resource_event messages
- ISSTR + IOSTR = total send_to_resource messages

Extension registers
None

Associated logs
None

ISCITR

Register type
Peg

Description
ISCITR counts call_info_to_resource messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
The following registers are associated with ISCITR:

- IOCITR, which counts the call_info_to_resource messages that the SSP receives from the SCP in a transaction that an office-based message initiates
- IOCIFR, which counts the call_info_from_resource messages that the SSP sends to the SCP in a transaction that an office-based message initiates.
- ISCIFR, which counts the call_info_from_resource messages that the SSP sends to the SCP in a transaction that a subscribed message initiates

Validation formula
IOCITR + ISCITR = total call_info_to_resource messages

Extension registers
None

Associated logs
None

ISSN

Register type
Peg

Description
ISSN counts the send_notification messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
The following registers are associated with ISSN:

- IOSN, which counts the send_notification messages that the SSP receives from the SCP in a transaction that an office-based message initiates
- IOTN, which counts the termination_notification messages that the SSP sends to the SCP in a transaction that an office-based message initiates
- ISTN, which counts the termination_notification messages that the SSP sends to the SCP in a transaction that a subscribed message initiates.

Validation formula
IOSN + ISSN = total send_notification messages

Extension registers
None

Associated logs
None

ISRRBE

Register type
Peg

Description
ISRRBE counts request_report_BCM_event messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
None

Validation formula
ISRRBE + IORRBE = total request_report_CM_event messages

Extension registers
None

Associated logs
None

ISCLOSI

Register type
Peg

Description
ISCLOSI counts close messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
None

Extension register
None

Associated logs
None

ISOFRCL

Register type
Peg

Description
ISOFRCL counts Offer_Call messages that the SSP receives from the SCP in a transaction that a subscribed message initiates.

Associated registers
None

Extension registers
None

Associated logs
None

AINNCR

Description

OM group Advanced Intelligent Networks Non-Call Related (AINNCR) counts AIN service enabler non-call related messages. These messages pass between the service control point (SCP) and the service switching point (SSP).

> ***Note:*** A non-call related (NCR) message refers to a message that does not affect call processing.

The SSP sends messages resulting from more than one type of trigger or event. A separate OM register provides a count for each trigger and event type. An OM register increases when the system correctly sends or receives a message that corresponds to that OM register. The system correctly sends a message when the system codes the message into the transaction capability application part (TCAP) protocol. The system receives a message correctly when the system decodes the message from the TCAP protocol.

To decode a TCAP message involves several stages of error checking. The system counts the message after decoding the message parameters. The system decodes messages even when errors are present in the message parameters. The system does not count the message when the system detects an error in the TCAP package or component.

Errors in the TCAP package or component are as follows:

- all fatal protocol errors
- errors as a result of a bad group of message, package or component type
- invalid response message
- bad correlation identifiers
- duplicated messages

AINNCR contains registers that count all non-call related AIN Service Enablers messages. Enter Messages as R02 in tables TRIGDIG or TRIGINFO to ensure an accurate message count.

The following table lists the key and info fields associated with OM group AINNCR.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group AINNCR.

Registers

The following table lists the registers associated with OM group AINNCR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AINNCR

Register name	Measures
NACG	N Automatic_Code_Gap
NAOVFW	N ACG_Overflow
NAGCR	N ACG_Global_Control_Restore
NAGCRS	N ACG_Global_Control_Restore_Success
NUPREQ	N Update_Request
NUPDAT	N Update_Data
NMFC	N Monitor_For_Change
NMSUCC	N Monitor_Success
NSREP	N Status Reported
NUPD	N Update
NUSUCC	N Update_Success

NACG

Register type
Peg

Description
NACG counts Automatic_Code_Gap messages the SSP receives from the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NACG and its associated registers:

- AINNCR registers NACG + NAGCR + NUPREQ + NMFC = total of all incoming, non-call related messages
- AINNCR registers NACG + NAGCR + NUPREQ + NMFC + total of AINICSUB group + total of AINICOFF group = total incoming messages
- AINNCR registers NACG + NUPREQ + NAGCR + NMFC = total of all incoming, unsolicited, non-call related messages

Extension registers
None

Associated logs
None

NAOVFW

Register type
Peg

Description
NAOVFW counts ACG_overflow messages sent from the SSP sends to the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NAOVFW and its associated registers:

- AINNCR registers NAOVFW + NAGCRS + NUPDAT + NMSUCC + NSREP = total of all outgoing non-call related messages
- AINNCR registers NAOVFW + NAGCRS + NUPDAT + NMSUCC + NSREP+ total of AINOGSUB group + total of AINOGOFF group = total outgoing messages

Extension registers
None

Associated logs
None

NAGCR

Register type
Peg

Description
NAGCR counts ACG_global_control_restore messages the SSP receives from the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NAGCR and its associated registers:

- AINNCR registers NAGCR + NACG + NUPREQ + NMFC = total of all incoming, non-call related messages
- AINNCR registers NAGCR + NACG + NUPREQ + NMFC + total of AINICSUB group + total of AINICOFF group = total incoming messages
- AINNCR registers NAGCR + NACG + NUPREQ + NMFC = total of all incoming, unsolicited, non-call related messages

Extension registers
None

Associated logs
None

NAGCRS

Register type
Peg

Description
NAGCRS counts ACG_global_control_restore_success messages the SSP sends to the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NAGCRS and its associated registers:

- AINNCR registers NAGCRS + NAOVFW + NUPDAT + NMSUCC + NSREP = total of all outgoing non-call related messages
- AINNCR registers NAGCRS + NAOVFW + NUPDAT + NMSUCC + NSREP+ total of AINOGSUB group + total of AINOGOFF group = total outgoing messages

Extension registers
None

Associated logs
None

NUPREQ

Register type
Peg

Description
NUPREQ counts update_request messages the SSP receives from the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NUPREQ and its associated registers:

- AINNCR registers NUPREQ + NAGCR + NACG + NMFC = total of all incoming, non-call related messages
- AINNCR registers NUPREQ + NACG + NAGCR + NMFC + total of AINICSUB group + total of AINICOFF group = total incoming messages
- AINNCR registers NUPREQ + NAGCR + NACG + NMFC = total of all incoming, unsolicited, non-call related messages

Extension registers
None

Associated logs
None

NUPDAT

Register type
Peg

Description
NUPDAT counts update_data messages the SSP sends to the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NUPDAT and its associated registers:

- AINNCR registers NUPDAT + NAGCRS + NAOVFW + NMSUCC + NSREP = total of all outgoing non-call related messages
- AINNCR registers NUPDAT + NAGCRS + NAOVFW + NMSUCC + NSREP+ total of AINOGSUB group + total of AINOGOFF group = total outgoing messages

Extension registers
None

Associated logs

NMFC

Register type
Peg

Description
NMFC counts monitor_for_change messages the SSP receives from the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NMFC and its associated registers:

- AINNCR registers NMFC + NACG + NAGCR + NUPREQ + total of AINICSUB group + total of AINICOFF group = total incoming messages
- AINNCR registers NMFC + NAGCR + NUPREQ + NACG + total of AINICSUB group + total of AINICOFF group = total incoming messages
- AINNCR registers NMFC + NAGCR + NACG + NUPREQ = total of all incoming, unsolicited, non-call related messages

Extension registers
None

Associated logs
None

NMSUCC

Register type
Peg

Description
NMSUCC counts monitor_success messages sent from the SSP sends to the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NMSUCC and its associated registers:

- AINNCR registers NMSUCC + NAGCRS + NUPDAT + NAOVFW + NSREP = total of all outgoing non-call related messages
- AINNCR registers NMSUCC + NAGCRS + NAOVFW + NUPDAT + NSREP+ total of AINOGSUB group + total of AINOGOFF group = total outgoing messages

Extension registers
None

Associated logs
None

NSREP

Register type
Peg

Description
NSREP counts status_reported messages the SSP sends to the SCP.

Associated registers
None

Validation formulas
The following formulas relate to NSREP and its associated registers:

- AINNCR registers NSREP + NAGCRS + NUPDAT + NMSUCC + NAOVFW = total of all outgoing non-call related messages
- AINNCR registers NSREP + NAGCRS + NAOVFW + NUPDAT + NMSUCC + total of AINOGSUB group + total of AINOGOFF group = total outgoing messages

Extension registers
None

Associated logs
None

NUPD

Register type
Peg

Description
NUPD counts Update messages sent from the SSP to the SCP.

Associated registers
NUSUCC

Extension registers
None

Associated logs
None

NUSUCC

Register type
Peg

Description
NUSUCC counts Update_Success messages sent from the SSP to the SCP.

Associated registers
NUPD

Extension registers
None

Associated logs
None

AINOGOFF

Description

OM group Advanced Intelligent Network Outgoing Office-based (AINOGOFF) counts AIN Service Enablers office-based messages the service switching point (SSP) sends to the service control point (SCP). This OM group monitors outgoing traffic to the SCP.

The SSP can send messages that are the result of more than one kind of trigger or event. A separate OM register provides a count for each trigger and event type. An OM register increases when the system sends or receives the message that corresponds with the register. A message sends when the message encodes into the transaction-capability application part (TCAP) protocol. The system receives a message correctly when the message decodes from the TCAP protocol.

Decoding a TCAP message involves several error checks. After the message parameters decode, the TCAP package counts the message when it detects an error in the message parameters. When the TCAP package or component detects an error, the message is not counted.

Errors that can occur in the TCAP package or component follow:

- all fatal protocol errors
- errors as a result of a bad group of messages, packages, or components types
- an invalid response message
- bad correlation identifiers
- duplicated messages

AINOGOFF contains registers that count call-related, outgoing, office-based, Service Enablers messages. The registers count messages entered as R02 in tables TRIGDIG or TRIGINFO.

Operating company personnel can subscribe to the following office-based triggers:

- Specific_Digit_String
- N11

The following table lists the key and info fields associated with OM group AINOGOFF.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group AINOGOFF.

Registers

The following table lists the registers associated with OM group AINOGOFF and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AINOGOFF (Sheet 1 of 2)

Register name	Measures
TOIASDS	TO Info_Analyzed for Specific_Digit_String
TOIAN11	TO Info_Analyzed for N11TOIAN11
EONB	EO Network_Busy
EOOCB	EO O_Called_Party_Busy
EOONA	EO O_No_Answer
EOOANS	EO O_Answer
IOTN	IO Termination_Notification
IOCCLR	IO CTR_Clear
IOCIFR	IO Call_Info_From_Resource
IORCLR	IO Resource_Clear
IOCLOSO	IO Close

Registers for OM group AINOGOFF (Sheet 2 of 2)

Register name	Measures
EOODCING	O_Disconnect_Calling
EOODCLED	O_Disconnect_Called
EOTOUT	Officebased TimeOUT

TOIASDS

Register type
Peg

Description
TOIASDS counts Info_Analyzed messages the SSP sends to the SCP. These messages are a result of a Specific_Digit_String trigger at the Info_Analyzed trigger detection point.

Associated registers
None

Extension registers
None

Associated logs
None

TOIAN11

Register type
Peg

Description
TOIAN11 counts Info_Analyzed messages the SSP sends to the SCP. The messages are a result of a N11 trigger at the Info_Analyzed trigger detection point.

Associated registers
None

Extension registers
None

Associated logs
None

EONB

Register type
Peg

Description
EONB counts the number of Network_Busy messages the SSP sends to the SCP. These messages are a result of a Network_Busy event request.

Associated registers
ESNB, which counts Network_Busy messages the SSP sends to the SCP. The messages are a result of a Network_Busy event request.

Validation formulas
The following formulas relate to EONB and its associated registers:

- AINOGSCUB register ESNB + AINOGOFF registers EONB + TSNBAFR = total Network_Busy messages
- AINOGOFF registers EONB +EOONA + EOOANS +EOOCB + AINOGSUB registers ESNB + ESOANS +ESONA + ESOCB + ESTBSY + ESTNA = total Service Enablers event detection point (EDP) messages

Extension registers
None

Associated logs
None

EOOCB

Register type
Peg

Description
EOOCB counts O_Called_Party_Busy messages the SSP sends to the SCP. These messages are a result of an O_Called_Party_Busy event request.

Associated registers
ESOCB, which counts O_Called_Party_Busy messages the SSP sends to the SCP. These messages are a result of an O_Called_Party_Busy event request.

Validation formula
AINGOSUB registers ESOCB + TSOCBCB + AINOGOFF register EOOCB = total O_Called_Party_Busy messages

Extension registers
None

Associated logs
None

EOONA

Register type
Peg

Description
EOONA counts O_No_Answer messages the SSP sends to the SCP. These messages are a result of an O_No_Answer event request.

Associated registers
ESONA, which counts O_Answer messages the SSP sends to the SCP. These messages are a result of a O_Answer event request.

Validation formula
AINOGSUB register ESOANS + AINOGOFF register EOOANS = total O_Answer messages

Extension registers
None

Associated logs
None

EOOANS

Register type
Peg

Description
EOOANS counts O_Answer messages sent from the SSP to the SCP. These messages are a result of an O_Answer event request.

Associated registers
ESOANS, which counts O_Answer messages the SSP sends to the SCP. These messages are a result of a O_Answer event request.

Validation formula
AINOGSUB register ESOANS + AINOGOFF register EOOANS = total O_Answer messages

Extension registers
None

Associated logs
None

IOTN

Register type
Peg

Description
IOTN counts Termination_Notification messages the SSP sends to the SCP, in a transaction that initiates by an office-based message.

Associated registers
The following registers are associated with IOTN:

- ISTN, which counts Termination_Notification messages sent from the SSP to the SCP, in a transaction that a subscribed message initiates.
- IOSN, which counts Send_Notification messages received at the SSP from the SCP, in a transaction that an office-based message initiates.
- ISSN, which counts Send_Notification messages received by the SSP from the SCP, in a transaction that a subscribed message initiates.

Validation formula
IOCITR + ISCITR = total Call_Info_To_Resource messages

Extension registers
None

Associated logs
None

IOCCLR

Register type
Peg

Description
IOCCLR counts CTR_Clear messages sent from the SSP to the SCP, in a transaction an office-based message initiates IO CTR_Clear.

Associated registers
None

Extension registers
None

Associated logs
None

IOCIFR

Register type
Peg

Description
IOCIFR counts Call_Info_From_Resource messages the SSP sends to the SCP in a transaction that an office-based message initiates.

Associated registers
The following registers are associated with IOCIFR:

- ISCIFR, which counts Call_Info_From_Resource messages the SSP sends to the SCP, in a transaction that a subscribed message initiates
- IOCITR, which counts Call_Info_To_Resource messages received at the SSP from the SCP, in a transaction that an office-based message initiates
- ISCITR, which counts Call_Info_To_Resource messages received by the SSP from the SCP, in a transaction that a subscribed message initiates

Validation formula
AINOGSUB register ISCIFR + AINOGOFF register IOCIFR = total Call_Info_From_Resource messages

Extension registers
None

Associated logs
None

IORCLR

Register type
Peg

Description
IORCLR counts Resource_Clear messages sent from the SSP to the SCP, in a transaction an office-based message initiates IO Resource_Clear.

Associated registers
The following registers are associated with IORCLR:

- ISRCLR, which counts Resource_Clear messages sent from the SSP to the SCP, in a transaction that initiates by a subscribed message
- IOSTR, which counts Send_to_Resource messages received at the SSP from the SCP, in a transaction that an office-based message initiates
- IOCRE, which counts Cancel_Resource_Event messages received at the SSP from the SCP, in a transaction that an office-based message initiates
- ISSTR, which counts Send_To_Resource messages received by the SSP from the SCP, in a transaction that a subscribed message initiates
- ISCRE, which counts Cancel_Resource_Event messages received by the SSP from the SCP, in a transaction that a subscribed message initiates

Validation formula
AINOGSUB register ISRCLR + AINOGOFF register IORCLR = total Resource_Clear messages

Extension registers
None

Associated logs
None

IOCLOSO

Register type
Peg

Description
IOCLOSO counts Close messages the SSP sends to the SCP, in a transaction that an office-based message initiates.

Associated registers
IOCLOSO, which counts Close messages the SSP sends to the SCP, in a transaction that a subscribed message initiated.

Validation formula
AINOGSUB register ISCLOSO + AINICOFF register IOCLOSI + AINICSUB register ISCLOSI + AINOGOFF register IOCLOSO = total closed messages

Extension registers
None

Associated logs
None

EOODCING

Register type
Peg

Description
EOODCING counts the number of O_Disconnect_Calling Requested Event messages sent from the SSP to the SCP as a result of an O_Disconnect Calling EDP-R being armed by an office subscribed trigger.

Associated registers
ESODCING, which counts the number of O_Disconnect_Calling event messages as a result of an O_Disconnect Calling EDP-R being armed by an individual subscribed trigger. These messages are a result of an O_Disconnect_calling event request.

Validation formula
AINOGSUB registers ESODCING + EOODCING = Total number of O_Disconnect Calling event requests sent to the SCP

Extension registers
None

Associated logs
None

EOODCLED

Register type
Peg

Description
EOODCLED counts the number of O_Disconnect_Called Requested Event messages sent from the SSP to the SCP as a result of a O_Disconnect_Called EDP-R being armed, by an office subscribed trigger.

Associated registers
ESODCLED, which counts the number of O_Disconnect_Called event messages as a result of an O_Disconnect Calling EDP-R being armed

by an individual subscriber. These messages are a result of a O_Disconnect _Calling event request.

Validation formula
AINOGSUB registers ESODCLED + EOODCLED = Total number of O_Disconnect_Called event requests sent to the SCP

Extension registers
None

Associated logs
None

EOTOUT

Register type
Peg

Description
EOTOUT counts the number of Timeout Requested Event messages sent from the SSP to the SCP as a result of an O_Mid_Call Timeout EDP-R being armed by an office subscribed trigger.

Associated registers
None

Extension registers
None

Associated logs
None

AINOGSB2

Description

OM group Advanced Intelligent Networks Outgoing Subscription-based Two (AINOGSB2), counts AIN Service Enablers subscription-based messages sent by the SSP to the SCP. OM group AINOGSB2 monitors outgoing traffic to the SCP.

The SSP sends messages in response to more than one type of trigger or event. A separate OM register provides a count for each trigger and event type. OM registers increment when the system sends or receives a message that corresponds with the register. A correct message is sent when the system encodes the message into transaction capability application part (TCAP) protocol. A correct message is received when the system decodes the message from TCAP protocol.

The system performs several stages of error checks to decode a TCAP message. The system decodes message parameters and counts the messages. The system counts a message even when errors are present in the message parameters. The system does not count a message when errors are detected in the TCAP package or its components.

The following errors can be detected in a TCAP package or its components:

- fatal protocol errors
- errors resulting from a bad group of messages, packages or component types
- invalid response messages
- bad correlation identifiers
- duplicate messages

AINOGSB2 contains registers that count call-related, outgoing, subscribed, Service Enablers messages. The registers count messages entered as R02 in Tables TRIGDIG, TRIGITM, or TRIGINFO.

The following table lists the key and info fields associated with OM group AINOGSB2.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group AINOGSB2.

Registers

The following table lists the registers associated with OM group AINOGSB2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AINOGSB2

Register name	Measures
ISCCLR	IS CTR_Clear
ESTMTOUT	Event subscribed T-Mid_call TimeOUT

ISCCLR

Register type
Peg

Description
ISCCLR register counts CTR_Clear messages that the SSP sends to the SCP in a transaction that a subscribed message initiates. This register is part of advanced intelligent networks outgoing subscription-based (AINOGSB2) OM group.

Associated registers
IOCCLR, which counts CTR_Clear messages sent from the SSP to the SCP, in a transaction an office-based message initiates IO CTR_Clear

Extension registers
None

Associated logs
None

ESTMTOUT

Register type
Peg

Description
ESTMTOUT counts the number of Timeout Requested Events messages sent from the SSP to the SCP as a result of a T_Mid_Call Timeout EDP-R being armed by a non-office subscriber trigger.

Associated registers
ESOMTOUT, which counts the number of Timeout Requested Events messages sent from the SSP to the SCP as a result of a T_Mid_Call Timeout EDP-R being armed by a non-office subscriber trigger

Extension registers
None

Associated logs
None

AINOGSUB

Description

OM group Advanced Intelligent Networks Outgoing Subscription-based (AINOGSUB) counts AIN Service Enablers subscription-based messages that the service switching point (SSP) sends to the service control point (SCP). AINOGSUB monitors the outgoing traffic to the SCP.

The SSP can send messages that are the result of more than one type of trigger or event. A separate OM register provides a count for each trigger and event type. An OM register increments when the system sends or receives a message that corresponds with the register. The system sends a message correctly when the system encodes the message into the transaction capability application part (TCAP) protocol. The system receives a message when the system decodes the message from the TCAP protocol.

The AIN messaging system performs several stages of error checks to decode a TCAP message. The system decodes the message parameters and counts the messages. The system counts the message when errors are present in the message parameters. The system does not count a message when the system detects an error in the TCAP package or component.

Types of errors in the TCAP package or component follow:

- all fatal protocol errors
- errors as a result of a bad group of messages, packages or component types
- invalid response message
- bad correlation identifiers
- duplicated messages

OM group AINOGSUB contains registers that count call-related, incoming, subscribed, AIN Service Enablers messages. The registers count messages entered as R02 in tables TRIGDIG, TRIGINFO, and TRIGITM.

Triggers that are subscribed to by line or by group follow:

- Automatic flexible routing (AFR)
- Channel_Setup PRI
- Specified_Carrier
- One-Plus_Prefix
- International
- Operator_Services
- Customized_Dialing_Plan
- Off_Hook_Immediate
- OFF_Hook_Delay
- O_Called_Party_Busy
- O_No_Answer
- Termination_Attempt
- T_Busy
- T_No_Answer

Note: Triggers: AFR, One_Plus_Prefix, Operator_Services, Specified_Carrier, and International can be office-based or subscribed. All messages sent as a result of this trigger count as subscribed.

The following table lists the key and info fields associated with OM group AINOGSUB.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group AINOGSUB.

Registers

The following table lists the registers associated with OM group AINOGSUB and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AINOGSUB (Sheet 1 of 3)

Register name	Measures
TSOAOHI	TS Origination_Attempt at the OFF-Hook_Immediate
TSICOHD	TS Info_Collected message for the Off-Hook_Delay
TSICSIT	TS Info_Collected message for the Shared_Interoffice_Trunk
TSIAPFC	TS Info_Analyze message for the Specific_Feature_Code
TSIASFC	TS Info_Analyze message for the Customized_Dialing_Plan
TSIACDP	TS Network_Busy message for the AFR
TSNBAFR	ES Network_Busy (ESNB)
ESNB	TS O_Called_Party_Busy for the O_Called_Party_Busy (TSOCBCB)
TSOCBDB	ES O_Called_Party_Busy message for the O_Called_Party_Busy (TSOCBCB)
ESOCB	TS O_No_Answer message for the O_No_Answer (TSONANA)
TSONANA	O_Disconnect_Calling Requested Event messages sent from the SSP to the SCP as a result of an O_Disconnect_Calling EDP-R being armed by a non-office subscribed trigger
ESODCING	O_Disconnect_Calling Requested Event messages sent from the SSP to the SCP as a result of an O_Disconnect_Calling EDP-R being armed by an office subscribed trigger

Registers for OM group AINOGSUB (Sheet 2 of 3)

Register name	Measures
ESODCLED	O_Disconnect_Called Requested Event messages sent from the SSP to the SCP as a result of an O_Disconnect_Calling EDP-R being armed by a non-office subscribed trigger
ESOMTOUT	Timeout Requested Event messages sent from the SSP to the SCP as a Mid_Call Timeout EDP-R being armed by a non-office subscribed trigger
ESONA	ES O_No_Answer
ESOANS	ES O_Answer
TSTATTA	TS Termination_Attempt for the Termination_Attempt
ESTBSY	ES T_Busy
ESTNA	ES T_No_Answer
ISCIFR	IS Call_Info_From_Resource
ISRCLR	IS Resource_Clear
ISCLOSO	IS Close
ISTN	IS Termination_Notification
TSTBSY	TDP subscribed T-Busy
TSTNA	TDP subscribed T_No_Answer
ESTANS	EDP subscribed T_Answer
TSICPRIB	TDP subscribed Info_Collected Channel_Setup_PRI trigger
TSIA1PLS	TDP subscribed Info_Analyzed One_Plus_Prefix trigger
TSIASPCR	TDP subscribed Info_Analyzed Specified_Carrier trigger

Registers for OM group AINOGSUB (Sheet 3 of 3)

Register name	Measures
TSIAINT	TDP subscribed Info_Analyzed International trigger
TSIAOPSV	TDP subscribed Info_Analyzed Operator_Services trigger

TSOAOHI

Register type
Peg

Description
TSOAOHI counts Origination_Attempt messages that the SSP sends to the SCP, as a result of an Off-Hook_Immediate trigger at the Origination_Attempt trigger detection point (TDP).

Associated registers
None

Extension registers
None

Associated logs
None

TSICOHD

Register type
Peg

Description
TSICOHD counts Info_Collected messages that the SSP sends to the SCP, as a result of an Off-Hook_Delay trigger.

Associated registers
None

Extension registers
None

Associated logs
None

TSICSIT

Register type
Peg

Description
TSICSIT counts Info_Collected messages that the SSP sends to the SCP, as a result of an encounter with trigger Shared_Interoffice_Trunk at the Info_Collected TDP.

Associated registers
ESTMTOUT, which counts the number of Timeout Requested Event messages sent from the SSP to the SCP as a result of a T_Mid_Call Timeout EDP-R being armed by a non-office subscribed trigger

Extension registers
None

Associated logs
None

TSIAPFC

Register type
Peg

Description
TSIAPFC counts Info_Analyzed messages that the SSP sends to the SCP, as a result of a Public_Feature_Code trigger at the Info_Analyzed TDP.

Associated registers
None

Extension registers
None

Associated logs
None

TSIASFC

Register type
Peg

Description
TSIASFC register counts Info_Analyzed messages that the SSP sends to the SCP, as a result of a Public_Feature_Code trigger at the Info_Analyzed TDP.

Associated registers
None

Extension registers
None

Associated logs
None

TSIACDP

Register type
Peg

Description
TSIACDP register counts Info_Analyzed messages that the SSP sends to the SCP, as a result of a Customized_Dialing_Plan trigger at the Info_Analyzed TDP.

Associated registers
None

Extension registers
None

Associated logs
None

TSNBAFR

Register type
Peg

Description
TSNBAFR counts Network_Busy messages that the SSP sends to the SCP, as a result of an automatic flexible routing (AFR) trigger at the Network_Busy TDP.

Associated registers
None

Extension registers
None

Associated logs
None

ESNB

Register type
Peg

Description
ESNB counts Network_Busy messages that the SSP sends to the SCP, as a result of a Network_Busy event request.

Associated registers
EONB, which counts the number of Network_Busy messages that the SSP sends to the SCP, as a result of a Network_Busy event request

Validation formula
AINOGOFF register EONB + AINOGSUB registers ESNB + TSNBAFR = total Network_Busy messages

Extension registers
None

Associated logs
None

TSOCBDB

Register type
Peg

Description
TSOCBCB counts O_Called_Party_Busy messages that the SSP sends to the SCP, as a result of an O_Called_Party_Busy trigger. When OTS Screening is active the system does not peg this register.

Associated registers
None

Extension registers
None

Associated logs
None

ESOCB

Register type
Usage

Description
ESOCB counts the number of O_Called_Party_Busy messages sent from the SSP to the SCP as a result of a O_Called_Party_Busy EDP-R.

Associated registers
EOOCB, which counts O_Called_Party_Busy messages sent from the SSP to the SCP, as a result of an O_Called_Party_Busy event request.

Validation formula
AINOGOFF register EOOCB + AINOGSUB registers ESOCB + TSOCBCB = total O_Called_Party_Busy messages

Extension registers
None

Associated logs
None

TSONANA

Register type
Peg

Description
TSONANA counts the number of O_No_Answer messages sent from the SSP to the SCP as a result of an O_No_Answer trigger. When OTS Screening is active, the system does not peg this register.

Associated registers
None

Extension registers
None

Associated logs
None

ESODCING

Register type
Peg

Description
ESODCING counts the number of O_Disconnect_Calling Requested Event messages sent from the SSP to the SCP as a result of an O_Disconnect_Calling EDP-R being armed by a non-office subscribed trigger.

Associated registers
EOODCING, which counts the number of O_Disconnect_Calling Requested Event messages sent from the SSP to the SCP as a result of an O_Disconnect Calling EDP-R being armed by an office subscribed trigger

Extension registers
None

Associated logs
None

ESODCLED

Register type
Usage

Description
ESODCLED counts the number of O_Disconnect_Called Requested Event messages sent from the SSP to the SCP as a result of an O_Disconnect_Called EDP-R being armed by a non-office subscribed trigger.

Associated registers
EOODCLED, which counts the number of O_Disconnect_Called Requested Event messages sent from the SSP to the SCP as a result of an O_Disconnect_Called EDP-R being armed by an office subscribed trigger

Extension register
None

Associated logs
None

ESOMTOUT

Register type
Peg

Description
ESOMTOUT counts the number of Timeout Requested Event messages sent from the SSP to the SCP as a result of an O_Mid_Call Timeout EDP-R being armed by a non-office subscribed trigger.

Associated registers
ESTMTOUT, which counts the number of Timeout Requested Event messages sent from the SSP to the SCP as a result of a T_Mid_Call Timeout EDP-R being armed by a non-office subscribed trigger.

Extension registers
None

Associated logs
None

ESONA

Register type
Peg

Description
ESONA counts O_No_Answer messages that the SSP sends to the SCP, as a result of an O_No_Answer event request.

Associated registers
EOONA, which counts O_No_Answer messages that the SSP sends to the SCP, as a result of an O_No_Answer event request

Validation formula
AINOGOFF register EOONA + AINOGSUB registers ESONA + TSONANA = total O_No_Answer messages

Extension registers
None

Associated logs
None

ESOANS

Register type
Peg

Description
ESOANS counts O_Answer messages the SSP sends to the SCP, as a result of an O_Answer event request.

Associated registers
EOOANS, which counts O_Answer messages the SSP sends to the SCP, as the result of an O_Answer event request.

Validation formula
AINOGOFF register EOOANS + AINOGSUB register ESOANS = total O_Answer messages

Extension registers
None

Associated logs
None

TSTATTA

Register type
Peg

Description
TSTATTA counts Termination_Attempt messages that the SSP sends to the SCP, as a result of a Termination_Attempt trigger.

Associated registers
None

Extension registers
None

Associated logs
None

ESTBSY

Register type
Peg

Description
ESTBSY register counts T_Busy messages that the SSP sends to the SCP, as a result of a T_Busy event request.

Associated registers
TSTBSY, which counts T_Busy messages sent from the SSP to the SCP. T_Busy messages indicate a line-subscribed trigger encounter with trigger T_Busy.

Validation formula
AINOGSUB registers TSTBSY + ESTBSY = total number of T_Busy messages

Extension registers
None

Associated logs
None

ESTNA

Register type
Peg

Description
ESTNA counts T_No_Answer messages that the SSP sends to the SCP, as a result of a T_No_Answer event request.

Associated registers
TSTNA, which counts T_No_Answer messages sent from the SSP to the SCP. T_No_Answer messages indicate a line-subscribed trigger encounter with the T_No_Answer trigger

Validation formula
AINOGSUB registers TSTNA + ESTNA = total number of T_No_Answer messages

Extension registers
None

Associated logs
None

ISCIFR

Register type
Peg

Description
ISCIFR counts Call_Info_From_Resource messages that the SSP sends to the SCP, in a transaction that a subscribed message initiates.

Associated registers
The following registers are associated with ISCIFR:

- IOCIFR, which counts Call_Info_From_Resource messages that the SSP sends to the SCP, in a transaction that an office-based message initiates
- IOCITR, which counts Call_Info_To-Resource messages the SSP receives from the SCP, in a transaction that an office-based message initiates
- ISCITR, which counts Call_Info_To_Resource messages received by the SSP from the SCP, in a transaction that a subscribed message initiates

Validation formula
AINOGOFF register IOCIFR + AINOGSUB register ISCIFR = total Call_Info_From_Resource messages

Extension registers
None

Associated logs
None

ISRCLR

Register type
Peg

Description
ISRCLR register counts Resource_Clear messages that the SSP sends to the SCP, in a transaction that a subscribed message initiates.

Associated registers
The following registers are associated with ISRCLR:

- IORCLR, which counts Call_Info_From_Resource messages that the SSP sends to the SCP, in a transaction that an office-based message initiates
- IOSTR, which counts Send_to_Resource messages that the SSP receives from the SCP, in a transaction that an office-based message initiates
- ISSTR, which counts Call_Info_To_Resource messages received by the SSP from the SCP, in a transaction that a subscribed message initiates
- IOCRE, which counts Cancel_Resource_Event messages that the SSP receives from the SCP, in a transaction that an office-based message initiates
- ISCRE, which counts Cancel_Resource_Event messages received by the SSP from the SCP, in a transaction that a subscribed message initiates

Validation formula
AINOGOFF register IOCIFR + AINOGSUB register ISCIFR = total Call_Info_From_Resource messages

Extension registers
None

Associated logs
None

ISCLOSO

Register type
Peg

Description
ISCLOSO counts Close messages that the SSP sends to the SCP, in a transaction that a subscribed message initiates.

Associated registers
IOCLOSO, which counts Close messages that the SSP sends to the SCP, in a transaction that a office-based message initiates.

Validation formula
AINOGSUB register ISCLOSO + AINICOFF register IOCLOSI + AINICSUB register ISCLOSI + AINOGOFF register IOCLOSO = total closed messages

Extension registers
None

Associated logs
None

ISTN

Register type
Peg

Description
ISTN register counts Termination_Notification messages that the SSP sends to the SCP, in a transaction that a subscribed message initiates.

Associated registers
The following registers are associated with ISTN:

- IOTN, which counts Termination_Notification messages that the SSP sends to the SCP, in a transaction that an office-based message initiates
- IOSN, which counts Send_Notification messages that the SSP receives from the SCP, in a transaction that an office-based message initiates
- ISSN, which counts Send_Notification messages received by the SSP from the SCP, in a transaction that a subscribed message initiates.

Validation formula
AINOGOFF register IOTN + AINOGSUB register ISTN = total Termination_Notification messages

Extension registers
None

Associated logs
None

TSTBSY

Register type
Peg

Description
TSTBSY counts each occurrence of a T_Busy trigger detection point-request (TDP-R).

Associated registers
None

Extension registers
None

Associated logs
None

TSTNA

Register type
Peg

Description
TSTNA register counts each occurrence of a T_No_Answer trigger detection point-request (TDP-R).

Associated registers
None

Extension registers
None

Associated logs
None

ESTANS

Register type
Peg

Description
ESTANS counts the number of times that the T_Answer event detection point-notification (EDP-N) occurs.

Associated registers
None

Extension registers
None

Associated logs
None

TSICPRIB

Register type
Peg

Description
TSICPRIB counts the number of times that the Channel_Setup_PRI trigger occurs.

Associated registers
None

Extension registers
None

Associated logs
None

TSIA1PLS

Register type
Peg

Description
TSIA1PLS counts the number of times that the One_Plus_Prefix trigger occurs.

Associated registers
None

Extension registers
None

Associated logs
None

TSIASPCR

Register type
Peg

Description
TSIASPCR counts the number of times that the Specified_Carrier trigger occurs.

Associated registers
None

Extension registers
None

Associated logs
None

TSIAINT

Register type
Peg

Description
TSIAINT counts the number of times that the International trigger occurs.

Associated registers
None

Extension registers
None

Associated logs
None

TSIAOPSV

Register type
Peg

Description
TSIAOPSV register counts the number of times that the Operator_Services trigger occurs.

Associated registers
None

Extension registers
None

Associated logs
None

AIOD

Description

OM group Automatic Identified Outward Dialing (AIOD) provides information about the transfer of outgoing billed calls from PBX stations. Registers for AIOD count the following activities:

- automatic identified outward dialing (AIOD) call identification messages received by the host DMS
- AIOD calls
- billable AIOD calls
- call identification messages the host DMS does not receive
- manual busy AIOD receivers
- system busy AIOD receivers

Two usage registers record when AIOD receivers are manual busy and system busy.

The AIOD feature bills and transfers outgoing calls to PBX stations. The host DMS sends information about the PBX line and the PBX trunk call over a separate data link. The data link connects the PBX to the host DMS. PBX stations with AIOD facilities send a call identification message to the host DMS for every call made. The PBX station with AIOD facilities ignores messages for calls that cannot be billed.

The host DMS must receive a call identification message from the PBX station. The host DMS must receive the message before the system will direct PBX line or trunk calls with billing capabilities. The DMS must receive the identification message before the time call processing routes the call to the PBX station. The operating company specifies a waiting period to process the call. The system directs expired calls to automatic identified outward dialing failure (AIFL) treatment, or to default PBX numbers and PBX special billing numbers.

The following table lists the key and info fields associated with OM group AIOD.

Key field	Info field
COMMON_LANGUAGE_NAME represents the name of the AIOD group.	None

If the AIOD call identification message is not received, enter in field FAILDEF in table AIODGRP. If the AIOD call identification message is late, call processing waits the length of time datafilled in field TIMEOUT in table AIODGRP.

Related functional groups

The PBXs with AIOD facilities operating group are associated with OM group AIOD.

Registers

The following table lists the registers associated with OM group AIOD and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AIOD

Register name	Measures
AIODBIL	AIOD billable calls
AIODCAL	AIOD calls
AIODDAT	AIOD data messages
AIODDEF	AIOD defaults
AIODMB	AIOD manual busy
AIODMBU	AIOD manual-busy usage
AIODSB	AIOD system busy
AIODSBU2	AIOD system-busy usage

AIODBIL

Register type
Peg

Description
AIODBIL counts billable AIOD calls.

Associated registers
None

Extension registers
None

Associated logs
None

AIODCAL

Register type
Peg

Description
AIODCAL counts outgoing calls from PBX stations with AIOD facilities. AIODCAL includes local or calls without billing capabilities.

Associated registers
AIODBIL

Validation formula
AIODCAL - AIODBIL = Number of local calls

Extension registers
None

Associated logs
None

AIODDAT

Register type
Peg

Description
AIODDAT counts AIOD call identification message the host DMS receives.

Associated registers
None

Extension registers
None

Associated logs
None

AIODDEF

Register type
Peg

Description
AIODDEF counts AIOD calls. The host DMS has not received a call identification message.

The system sends the call to automatic identified outward dialing failure (AIFL) treatment. The system may send the call with a bill to the default PBX number or the PBX special billing number. Enter the default action in field FAILDEF in table AIODGRP.

Associated registers
None

Extension registers
None

Associated logs
LINE138

AIODMB

Register type
Peg

Description
AIODMB counts AIOD receivers in the host DMS that are manual busy.

Associated registers
None

Extension registers
None

Associated logs
TRK207

AIODMBU

Register type
Usage

Scan rate
100 seconds

Description
AIODMBU records manually busy AIOD receivers in the host DMS.

Associated registers
None

Extension registers
None

Associated logs
None

AIODSB

Register type
Peg

Description
AIODSB counts AIOD receivers in the host DMS that are system busy.

Associated registers
None

Extension registers
None

Associated logs
TRK207, TRK209

AIODSBU2

Register type
Usage

Scan rate
100 seconds

Description
AIODSBU2 records when the AIOD receivers in the host DMS are system busy.

Associated registers
None

Extension registers
None

Associated logs
TRK207, TRK209

AL1SVCOM

Description

OM group AL1SVCOM captures operational measurement information for switched virtual circuit (SVC) external network connection bearer path call origination attempts and failures. Group registers collect information for the following UA-AAL1 node types:

- MG 4000
- IW SPM
- DPT SPM
- MG 9000 through a Gateway Controller (GWC)
- MG 9000 access bridge interface (ABI)

MG 9000 nodes through a GWC display as logical group names derived from the LGRPINV table. MG 9000 ABI nodes display the name of the DS-512 connected ABI peripheral.

Log reports XPKT301 and XPKT302 correspond to AL1SVCOM failure registers. For SPM-based nodes, the XPKT301 log reports ATM SVC setup and established call failures.

For MG 9000 nodes, the XPKT301 log reports ATM SVC setup failures and the XPKT302 log reports established call failures.

Inter-office MG 9000 calls using a BICC GWC, have only an originating node to report for the SVC call failure. The terminating side of the bearer path through the ATM network is located in another office.

AL1SVCOM group registers increment for both originating and terminating nodes therefore, except for inter-office MG 9000 calls using a BICC GWC, a single generated XPKT301 or XPT302 log report increments two AL1SVCOM registers.

The following table lists the key and info fields associated with OM group AL1SVCOM.

Key field	Info field
SVC_OM_PM_INFO1	SVC_OM_TUPLE_DATA1

Related functional groups

There are no functional groups associated with OM group AL1SVCOM.

Registers

The following table lists the registers for OM group AL1SVCOM.

Registers for OM group AL1SVCOM

Register name	Measures
NOSVCAT	Number of SVC call attempts
NOSVCFL	Number of SVC connection failures
ISSVCAT	Number of intra-switch SVC call attempts
ISSVCFL	Number of intra-switch SVC connection failures
DPTSVCA	Number of dynamic packet trunking (DPT) inter-switch SVC call attempts
DPTSVCF	Number of DPT inter-switch SVC call failures
NRTEDEST	No route to destination SVC call failure
NOUSRRES	No user responding SVC connection failure
VPCINAVL	Request VPI/VCI not available
BWTHNAVL	Bandwidth not available
TEMPFAIL	Temp failure SVC connection failure
RESUNAVL	Resource unavailable SVC connection failure
OTH_CC	All other ATM cause codes

NOSVCAT

Register type
Peg

Description
NOSVCAT pegs all intra-switch and inter-switch external network bearer path SVC origination attempts.

Associated registers
ISSVCAT, DPTSVCA

Validation formula
ISSVCAT + DPTSVCA = NOSVCAT

Extension registers
NOSVCAT2

Associated logs
None

NOSVCFL

Register type
Peg

Description
NOSVCFL pegs all intra-switch and inter-switch external network bearer path SVC call connection failures.

Associated registers
ISSVCFL, DPTSVCF

Validation formula
ISSVCFL + DPTSVCF = NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

ISSVCAT

Register type
Peg

Description
ISSVCAT pegs all intra-switch external network bearer path SVC origination attempts.

Associated registers
DPTSVCA, NOSVCAT

Validation formula
DPTSVCA + ISSVCAT = NOSVCAT

Extension registers
ISSVCAT2

Associated logs
None

ISSVCFL

Register type
Peg

Description
ISSVCFL pegs all intra-switch external network bearer path SVC call connection failures.

Associated registers
DPTSVCF, NOSVCFL

Validation formula
DPTSVCF + ISSVCFL = NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

DPTSVCA

Register type
Peg

Description
DPTSVCA pegs all inter-switch external network bearer path SVC origination attempts when the originating or terminating agent call processing selector is a DPT trunk.

Associated registers
ISSVCAT, NOSVCAT

Validation formula
DPTSVCA + ISSVCAT = NOSVCAT

Extension registers
DPTSVCA2

Associated logs
None

DPTSVCF

Register type
Peg

Description
DPTSVCF pegs inter-switch external network bearer path SVC call connection failures when the originating or terminating agent call processing selector is a DPT trunk.

Associated registers
ISSVCFL, NOSVCFL

Validation formula
DPTSVCF + ISSVCFL = NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

NRTEDEST

Register type
Peg

Description
NRTEDEST pegs external network bearer path SVC failures when the node sends back a cause code 3 (no route to destination).

Associated registers
ISSVCFL, DPTSVCF, NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

NOUSRRES

Register type
Peg

Description
NOUSRRES pegs external network bearer path SVC failures when the node sends back a cause code18 (no user responding).

Associated registers
ISSVCFL, DPTSVCF, NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

VPCINAVL

Register type
Peg

Description
VPCINAVL pegs external network bearer path SVC failures when the node sends back a cause code 35 (requested VPI/VCI not available).

Associated registers
ISSVCFL, DPTSVCF, NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

BWTHNAVL

Register type
Peg

Description
BWTHNAVL pegs external network bearer path SVC failures when the node sends back a cause code 37 (user cell rate not available).

Associated registers
ISSVCFL, DPTSVCF, NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

TEMPFAIL

Register type
Peg

Description
TEMPFAIL pegs external network bearer path SVC failures when the node sends back a cause code 41 (temp failure).

Associated registers
ISSVCFL, DPTSVCF, NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

RESUNAVL

Register type
Peg

Description
RESUNAVL pegs external network bearer path SVC failures when the node sends back a cause code 47 (resource unavailable).

Associated registers
ISSVCFL, DPTSVCF, NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

OTH_CC

Register type
Peg

Description
OTH_CC pegs external network bearer path SVC failures when the node sends back a cause code that is not reported in the previous registers (all cause codes other than 3, 18, 35, 37, 41, or, 47).

Associated registers
ISSVCFL, DPTSVCF, NOSVCFL

Extension registers
None

Associated logs
XPKT301, XPKT302

AMA

Description

OM group Automatic Message Accounting summary (AMA) records:

- the total number of AMA record entries that the system generates for downstream processing
- the number of occurrences of emergency transfer between AMA tape units
- the number of times the system routes an AMA call to a Traffic Operator Position System (TOPS)

The AMA subsystem collects call data and automatically records it on a data storage device. During a call, most call processing agencies store call data in a call condense block (CCB). At call disconnect, the CCB sends the data to a buffer. The method the AMA subsystem uses to record call data is the Device-Independent Recording Package (DIRP) feature. The DIRP feature automatically assigns the AMA records to selected recording devices like disk or tape. The stored data transmits to the operating company downstream data processing center. The AMA data can be retrieved automatically as required for correct customer billing and call analysis.

The following table lists the key and info fields associated with OM group AMA.

Key field	Info field
None	None

Related functional groups

DIRP Device Independent Recording Package TOPS Traffic Operator Position System is associated with OM group AMA.

Registers

The following table lists the registers associated with OM group AMA and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AMA

Register name	Measures
AMAEMTR	AMA emergency transfer
AMAENT	AMA record entries
AMAFREE	AMA free of charge
AMAROUTE	AMA calls route to TOPS
AMASCRN	AMA screen

AMAEMTR

Register type
Peg

Description
AMAEMTR counts emergency transfers between AMA tape units. An emergency transfer occurs when an active tape unit is not present, or when the system cannot write a correct end-of-tape transfer record.

An emergency transfer does not imply a loss of data unless the *from* or *to* tape drive number in the AMA117 log with the transfer is -1. A-1 signifies no active drive assigned before or after the transfer. In this case, the current software tape buffer, which possibly contains call data, is overwritten.

AMAEMTR does not apply to DMS-250. The values are set to zero.

Associated registers
None

Extension registers
None

Associated logs
AMA117, DIRP101

AMAENT

Register type
Peg

Description
AMAENT counts AMA record entries the system generates for downstream processing. You can identify these records as X`fx' records (x=0-6). One call generates one initial AMA record entry. TOPS calls that involve a billing number on a *hot* list or charge adjustments can generate additional initial record entries. The system generates the complete set of initial record entries (with possible intervening extension entries) for a call consecutively on a last-in, first-out basis.

AMAENT increases when the system formats call record entries, after the call ends. The total number of calls that are put on AMA tape or disk can be not equal to AMAENT if the AMA fails because of no devices (files).

In DMS-250 applications, this register increases when a call detail record (CDR) is made for AMA.

Associated registers
None

Extension registers
AMAENT2

Associated logs
AMAB100, AMAB101, AMAB102, AMAB103, AMAB104, AMAB105, AMAB106, AMAB108, AMAB109, AMAB110, AMAB111, DIRP101

AMAFREE

Register type
Peg

Description
AMAFREE counts AMA calls that the system routes free of charge. A call can be free of charge because recording devices or units are not available, or because of a dead process.

AMAFREE does not apply to DMS-250. All values will be set to zero. Office parameter, AMA_FAILURE_FREE CALL in table OFCENG is set to Y.

Associated registers
None

Extension registers
AMAENT2

Associated logs
DIRP101

AMAROUTE

Register type
Peg

Description
AMAROUTE increases for TOPS offices when no CAMA TOPS recording units (CTRU) are available to store call details. The AMA recording device receives an EM3 treatment application. AMAROUTE does not apply to DMS-250. Values will be set to zero.

Associated registers
EXT_EXTOVFL, increases when a type of extension block is not available

Extension registers
None

Associated logs
None

AMASCRN

Register type
Peg

Description
AMASCRN pegs the number of AMA records screened. Operating company personnel can screen an AMA record for the following reasons:

- A call disconnects before a minimum billing interval expires.
- The switch only tandems a call from an incoming to an outgoing trunk.

Associated registers
None

Extension registers
None

Associated logs
None

ANN

Description

OM group Announcements (ANN) provides information about traffic for recorded announcement machines. ANN contains two peg registers (ANNATT and ANNOVFL), three usage registers with a scan rate of 100 seconds (ANNTRU, ANNSBU, and ANNMBU) and one usage register with a scan rate of 10 seconds (ANNFTRU). All types of DMS offices have ANN.

The following table lists the key and info fields associated with OM group ANN.

Key field	Info field
COMMON_LANGUAGE_NAME CLLI is the common-language location identifier for the announcement.	ANN_OMINFO is the maximum number of calls to be attached at the same time to the announcement.

The fixed CLLI for ANN are:

- ACTSTOPS Automatic-Coin Toll Service
- AOSSANN Auxiliary Operator Services System Announcement

Three tables must be entered with data: ANNS, ANNMEMS, and CNALDSPK. Table ANNS contains the data for each announcement assigned in the switch. The subscriber defines other CLLI. Table ANNMEMS assigns tracks to announcements.

Table CNALDSPK identifies the trunk over which the announcement plays. The Calling Number Announcement (CNA) feature is optional. CNA can replace existing automatic number announcer circuits (ANAC).

Related functional groups

There are no functional groups associated with OM group ANN.

Registers

The following table lists the registers associated with OM group ANN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ANN

Register name	Measures
ANNATT	Announcement attempts
ANNMBU	Announcement manual busy usage
ANNOVFL	Announcement overflow
ANNSBU	Announcement system busy use
ANNTRU	Announcement traffic use
ANNFTRU	Announcement fast traffic use

ANNATT

Register type
Peg

Description
ANNATT counts calls that route to an announcement.

Associated registers
The following registers are associated with ANNATT:

- OFZ_INANN counts calls that originate on a trunk and the system first routes to an announcement.
- OFZ_ORIGANN counts calls that originate on a line and the system first routes to an announcement.

  Note: Registers OFZ_INANN and OFZ_ORIGANN do not count calls that the system routes to an announcement after the system first routes the calls somewhere else.

- OTS_ORGTRMT counts calls that originate on a line and the system connects to a tone or an announcement.
- OTS_INCTRMT counts calls that originate on a trunk and the system connects to a tone or an announcement.
- TONES_TNEATT counts attempts to connect to a tone generator.

Validation formulas
The following formulas relate to ANNATT and its associated registers:

- Σ (ANN_ANNATT) OFZ_INANN + OFZ_ORIGANN
- Σ (ANN_ANNATT) + Σ (TONES_TONEATT)

  TONES TONES

  OTS_ORGTRMT + OTS_INCTRMT

Extension registers
None

Associated logs
LINE138, TRK138

ANNMBU

Register type
Usage

Scan rate
100 seconds

Description
ANNMBU records when an announcement is manual busy.

Each announcement has a minimum of one track. The system assigns each track one trunk circuit or channel. The system connects one announcement and one ANN tuple to each track. Table ANNMEMS defines the connections between tracks and announcements. ANNMBU measures the following busy states:

- track manual busy
- track network management (NWM) busy

Associated registers
ANNTRU, ANNSBU

Validation formula
TOTAL BUSY USE = ANNTRU + ANNSBU + ANNMBU

Extension registers
None

Associated logs
None

ANNOVFL

Register type
Peg

Description
ANNOVFL counts calls that the system routes to a recorded announcement, but that does not connect to the announcement for two reasons. The maximum number of calls are connected to the announcement or the announcement is maintenance busy. Register ANNOVFL does not count the number of calls that overflow because of network block. This register does not apply to DMS-250. All values will be set to zero. Office parameter, AMA_FAILURE_FREE CALL in table OFCENG is set to Y.

Associated registers
None

Extension registers
None

Associated logs
None

ANNSBU

Register type
Usage

Scan rate
100 seconds

Description
ANNSBU records when an announcement is system busy. Each announcement uses one or more tracks. Table ANNMEMS defines the connections between tracks and announcements. The busy states that ANNSBU measures are as follows:

- track system busy
- track peripheral module busy
- queued to be manual busy

Associated registers
ANNTRU, ANNMBU

Validation formula
TOTAL BUSY USE = ANNTRU + ANNSBU + ANNMBU

Extension registers
None

Associated logs
TRK106

ANNTRU

Register type
Usage

Scan rate
100 seconds

Description
ANNTRU records when an announcement is traffic busy.

Associated registers
ANNMBU, ANNSBU

Validation formula
TOTAL BUSY USE = ANNTRU + ANNSBU + ANNMBU

Extension registers
None

Associated logs
None

ANNFTRU

Register type
Usage

Scan rate
10 seconds

Description
ANNFTRU records when an announcement is traffic busy. This scan rate is needed because a typical broadcast announcement is 10 to 15 seconds long.

Associated registers
ANNMBU, ANNSBU

Validation formula
TOTAL BUSY USE = ANNTRU + ANNSBU + ANNMBU

Extension registers
None

Associated logs
None

APOCCS

Description

Application processor node system counts (APOCCS)

The OM group APOCCS measures the scheduler class on the application processor (AP) node.

The OM group APOCCS provides one tuple for each sync-matched node.

Key field	Info field
SMN_SYMB_NUM	None

Related functional groups

The following are associated functional groups of OM group APOCCS:

- File Processor
- Line Trunk Server

Registers

The following table lists the registers associated with OM group APOCCS and what they measure. For a description of a register, click on the register name.

Registers for OM group APOCCS

Register name	Measures
APBKG	AP node background process occupancy (APBKG)
APCPOCC	AP node call-processing occupancy (APCPOCC)
APFORE	AP node system-related occupancy (APFORE)
APIDLE	AP node idle occupancy (APIDLE)
APIO	AP node I/O occupancy (APIO)

Registers for OM group APOCCS

Register name	Measures
APMAINT	AP node maintenance occupancy (APMAINT)
APSCHED	AP node scheduler occupancy (APSCHED)

APBKG

Register type
Peg

Description
AP node background process occupancy (APBKG)

Register APBKG increases the CPXFR process and measures the background-related processes occupancy.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

APCPOCC

Register type
Peg

Description
AP node call-processing occupancy (APCPOCC)

The CPXFR process increases register APCPOCC. This register measures call-processing occupancy.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

APFORE

Register type
Peg

Description
AP node system-related occupancy (APFORE)

The CPXFR process increases register APFORE. This register measures the system-related processes occupancy.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

APIDLE

Register type
Peg

Description
AP node idle occupancy (APIDLE)

The CPXFR process increases register APIDLE. This register measures the time the CPU spends in the IDLE state.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

APIO

Register type
Peg

Description
AP node I/O occupancy (APIO)

The CPXFR process increases register APIO. This register measures the time the CPU spends performing input/output (I/O) functions.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

APMAINT

Register type
Peg

Description
AP node maintenance occupancy (APMAINT)

The CPXFR process increases register APMAINT. This register measures the maintenance-related processes occupancy.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

APSCHED

Register type
Peg

Description
AP node scheduler occupancy (APSCHED)

The CPXFR process increases register APSCHED. This register measures the scheduler occupancy.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs

There are no associated logs.

APSYS

Description

OM group Application Processor Node System (APSYS) counts basic hardware components of the application processor (AP), including:

- the processor base maintenance
- port maintenance
- as state changes in the duplex operation of the node

The APs are sync-matched nodes, and assume it to operate in synchronous mode. Although the AP remains in use while not in sync, the AP considers the simplex mode of operation an in-service trouble state. The amount of time the node spends in the simplex mode increases in the registers in this group. These registers measure the accuracy of the software that runs on the node and record details from the routine exercise (REX) tests.

The following table lists the key and info fields associated with OM group APSYS.

Key field	Info field
SMN_SYMB_NUM	None

Related functional groups

There are no functional groups associated with OM group APSYS.

Registers

The following table lists the registers associated with OM group APSYS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group APSYS (Sheet 1 of 2)

Register name	Measures
APCPUERR	AP node CPU soft error
APCPUFLT	AP node CPU test fault
APMEMERR	AP node memory soft error
APMEMFLT	AP node memory test fault

Registers for OM group APSYS (Sheet 2 of 2)

Register name	Measures
APMSMPXU	AP node manual simplex operation
APMSWACT	AP node manual activity change attempt
APPRTERR	AP node memory soft error
APPRTFLT	AP node port test fault
APRCPUFL	AP node REX CPU class failed
APREXFLT	AP node REX test fault
APRMEMFL	AP node REX memory class failed
APRPRTFL	AP node REX port class failed
APRSMPXU	AP node REX test simplex operation
APRSWACT	AP node REX test activity change attempt
APSDROP	AP node system drop-of-sync attempt
APSSMPXU	AP node manual simplex operation
APSSWACT	AP node system activity change attempt
APSSYNC	AP node system sync attempt
APSWERR	AP node soft error
APTRAP	AP node trap
APTRMISM	AP node transient mismatch

APCPUERR

Register type
Peg

Description
APCPUERR increases when the system finds a transient CPU fault or an entry error related to the CPU card.

Associated registers
None

Extension registers
None

Associated logs
PM310

APCPUFLT

Register type
Peg

Description
APCPUFLT increases when a CPU test fails for a new reason.

Associated registers
None

Extension registers
None

Associated logs
PM310

APMEMERR

Register type
Peg

Description
APMEMERR increases when the system finds a transient memory fault or an entry error related to a memory card.

Associated registers
None

Extension registers
None

Associated logs
PM311, PM319

APMEMFLT

Register type
Peg

Description
APMEMFLT increases when a memory test fails for a new reason.

Associated registers
None

Extension registers
None

Associated logs
PM311

APMSMPXU

Register type
Peg

Description
APMSMXPU measures the time the AP spends in a simplex mode of operation as a result of a manually initiated action.

Associated registers
None

Extension registers
None

Associated logs
None

APMSWACT

Register type
Peg

Description
APMSWACT increases with every manual attempt to switch processor activity on the AP.

Associated registers
None

Extension registers
None

Associated logs
PM501

APPRTERR

Register type
Peg

Description
APPRTERR increases when the system finds a transient port fault or an entry error related to a port card.

Associated registers
None

Extension registers
None

Associated logs
PM312, 319

APPRTFLT

Register type
Peg

Description
APPRTFLT increases when a port test fails for a new reason.

Associated registers
None

Extension registers
None

Associated logs
PM312

APRCPUFL

Register type
Peg

Description
APRCPUFL increases when the REX CPU class test fails.

Associated registers
None

Extension registers
None

Associated logs
PM900

APREXFLT

Register type
Peg

Description
APREXFLT increases when the system aborts the REX test because of a resource that is not available or because of a lack of proper setup.

Associated registers
None

Extension registers
None

Associated logs
IEM900

APRMEMFL

Register type
Peg

Description
APRMEMFL increases when the REX memory class test fails.

Associated registers
None

Extension registers
None

Associated logs
IEM900

APRPRTFL

Register type
Peg

Description
APRPRTFL increases when the REX port class test fails.

This register is not activated.

Associated registers
None

Extension registers
None

Associated logs
IEM900

APRSMPXU

Register type
Peg

Description
APRSMPXU measures the amount of time the AP spends in a simplex mode of operation as a result of an action initiated by a REX test.

Associated registers
None

Extension registers
None

Associated logs
None

APRSWACT

Register type
Peg

Description
APRSWACT increases when the REX test attempts to test switch processor activity on the AP.

Associated registers
None

Extension registers
None

Associated logs
PM501

APSDROP

Register type
Peg

Description
APSDROP increases when the system attempts to take the AP out of its synchronous mode of operation.

Associated registers
None

Extension registers
None

Associated logs
PM317, PM318, PM503

APSSMPXU

Register type
Peg

Description
APSSMPXU measures the amount of time the AP spends in simplex mode of operation as a result of a system-initiated action.

Associated registers
None

Extension registers
None

Associated logs
None

APSSWACT

Register type
Peg

Description
APSSWACT increases when the system attempts to switch processor activity on the AP.

Associated registers
None

Extension registers
None

Associated logs
None

APSSYNC

Register type
Peg

Description
APSSYNC increases when the system attempts to put the AP in synchronous mode of operation.

Associated registers
None

Extension registers
None

Associated logs
PM503

APSWERR

Register type
Peg

Description
APSWERR increases when a soft error report occurs.

Associated registers
None

Extension registers
None

Associated logs
None

APTRAP

Register type
Peg

Description
APTRAP increases when a software trap occurs.

Associated registers
None

Extension registers
None

Associated logs
PM320

APTRMISM

Register type
Peg

Description
APTRMISM increases when a transient mismatch occurs.

Associated registers
None

Extension registers
None

Associated logs
PM317, PM318, PM503

AR

Description

OM group Automatic Recall (AR) monitors the use of the AR feature for an office. You can obtain this feature alone or as part of the universal access group. AR counts the following events:

- universal access attempts and denials
- feature activation, denials, and reactivation
- two-level activation
- lack of software resources
- denial announcement and tones
- immediate and delayed processing
- timeouts (These events are not counted on the DMS-100G switch.)
- originate, terminate, and resume scanning (These events are not counted on the DMS-100G switch.)
- selective call rejections (These events are not counted on the DMS-100G switch.)
- subscriber terminated requests (These events are not counted on the DMS-100G switch.)
- terminations that are not normal of one level and two-level activation of AR (These events are not counted on the DMS-100G switch.)
- operation code input that is not correct
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain registers when subscribers do one of the following from an off-board application:
  - — query the status and/or programmed information of corresponding subscribed-to services
  - — generate a request to activate, deactivate or change the services

  For more information about the Off-board Service Control feature, refer to *Advanced Intelligent Network Essentials Service Implementation Guide*, 297-5161-021, and the *Advanced Intelligent Network Essentials Service Enablers*, 297-5161-022.

  The Off-board Service Control feature applies only to DMS.

The following table lists the key and info fields associated with OM group AR.

Key field	Info field
None	None

For AR OM registers to increase, enter AR activation and deactivation codes in table IBNXLA for Residential Enhanced Service (RES) customer groups.

Related functional groups

The CLASS/CMS functional group is associated with OM group AR.

Registers

The following table lists the registers associated with OM group AR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AR (Sheet 1 of 2)

Register name	Measures
ARABT	AR abnormal termination
ARARN	AR attempts terminating on a network
ARATT	AR attempts
ARBDIN	AR bad input
ARDATT	AR deactivation attempts
ARDENY	AR denial
ARDLAY	AR delay
ARDSBLID	AR disabling LCID
ARFDEN	AR feature denied
ARIMED	AR immediate
ARLTDA	AR long-term denial announcement
ARNIMED	Immediately processed internodal AR requests

Registers for OM group AR (Sheet 2 of 2)

Register name	Measures
AROPTO	AR opt out
AROSCN	AR originating scanning
AROVFL	AR software resource overflow
ARPRCD	AR proceed
ARPVTALW	AR private allowed
ARPVTBLK	AR private block
ARRACT	AR reactivation
ARRSCN	AR resume screening
ARSCR	AR selective call rejection
ARSTDA	AR short-term denial announcement
ARSTDT	AR short-term denial tone
ARSTR	AR subscriber-terminated requests
ARTIME	AR timeout
ARTSCN	AR terminating scanning
ARUNIV	AR universal attempts

ARABT

Register type
Peg

Description
ARABT counts AR requests that terminate during delayed processing because of:

- interswitch protocol
- communications problems such as network congestion
- system errors

The call routes to SYFL treatment if a system error occurs. The register is not supported on the DMS-100G switch.

ARATT increases as ARABT increases.

Associated registers
ARATT

Extension registers
None

Associated logs
LINE138

ARARN

Register type
Peg

Description
ARARN counts call attempts made on a line with the AR line feature that terminate on a network.

Associated registers
None

Extension registers
None

Associated logs
None

ARATT

Register type
Peg

Description
ARATT increases when a user dials the AR feature activation code.

ARATT increases each time ARABT increases.

Associated registers
ARABT

Extension registers
None

Associated logs
None

ARBDIN

Register type
Peg

Description
ARBDIN counts two-level activations of AR that cannot be completed because either a subscriber enters a wrong number or a timeout occurs.

Associated registers
None

Extension registers
None

Associated logs
None

ARDATT

Register type
Peg

Description
ARDATT increases when a user dials the AR feature deactivation code. The register is not supported on the DMS-100G switch.

For DMS only: ARDATT is pegged when the AR Update message to deactivate AR service is received (off-board service update request).

Associated registers
None

Extension registers
None

Associated logs
None

ARDENY

Register type
Peg

Description
ARDENY counts the number of AR universal attempts that the system denied because the DENYAR option is in effect.

ARFDEN increases when ARDENY increases.

Associated registers
ARFDEN

Extension registers
None

Associated logs
None

ARDLAY

Register type
Peg

Description
ARDLAY counts the times processing delayed because the called line is busy when the user dials the AR feature activation code. The register is not supported on the DMS-100G switch.

ARATT increases when ARDLAY increases.

Associated registers
ARATT

Extension registers
None

Associated logs
AMAB117

ARDSBLID

Register type
Peg

Description
ARDSBLID refers to the number of times that an AR subscriber disables the latest caller ID. The register increases when an AR subscriber presses operation code “9" to disable the latest incoming calling identification (LCID).

Associated registers
None

Extension registers
None

Associated logs
None

ARFDEN

Register type
Peg

Description
ARFDEN increases when a user cannot activate AR because:

- the feature is not available on the line or in the office
- other features prevent the use of AR

For example, AR cannot activate on the second leg of a three-way call. The call routes to negative acknowledgement (NACK) or feature not acknowledged (FNAL) treatment when ARFDEN increases.

ARATT increases when ARFDEN increases.

Associated registers
ARATT

Extension registers
None

Associated logs
LINE138

ARIMED

Register type
Peg

Description
ARIMED increases when a subscriber dials the AR feature activation code and AR occurs immediately.

ARATT increases when ARIMED increases. ARIMED increases when ARSCR increases.

Associated registers
ARATT, ARSCR

Extension registers
None

Associated logs
AMAB117

ARLTDA

Register type
Peg

Description
ARLTDA increases when a call receives a long-term denial announcement following an attempt to activate AR.

ARATT increases when ARLTDA increases.

Associated registers
ARATT

Extension registers
None

Associated logs
None

ARNIMED

Register type
Peg

Description
ARNIMED increases when the system processes an internodal AR request. The register is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AROPTO

Register type
Peg

Description
AROPTO increases when a subscriber hangs up before two-level activation of AR is complete.

Associated registers
None

Extension registers
None

Associated logs
None

AROSCN

Register type
Peg

Description
AROSCN increases when an AR request results in originating scanning. The register increases once for each AR request. AROSCN is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
None

AROVFL

Register type
Peg

Description
AROVFL increases when a call receives short-term denial tone and there are no software resources available to activate AR. When AROVFL increases, the system routes the call to one of the following treatments:

- no software resource (NOSR)
- no service circuit (NOSC)
- network blockage, heavy traffic (NBLH)

ARATT increases when AROVFL increases.

Associated registers
ARATT

Extension registers
None

Associated logs
LINE138

ARPRCD

Register type
Peg

Description
ARPRCD increases when a subscriber dials the AR activation code. The register also increases when a subscriber dials 1 to proceed with two-level activation of an AR request.

Associated registers
None

Extension registers
None

Associated logs
None

ARPVTALW

Register type
Peg

Description
ARPVTALW counts the number of AR-activated calls to a private number that CASOP allows. CASOP allows calls through to a private number when the carrier is:

- the Local Exchange Carrier (LEC)
- the operating telephone company (OTC), which can be the LEC
- an approved Equal Access (EA) carrier, specified in table OCCINFO

ARPVTALW is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
None

ARPVTBLK

Register type
Peg

Description
ARPVTBLK increases when the system blocks an AR activation code and terminates the AR activation code to treatment. The register is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
None

ARRACT

Register type
Peg

Description
ARRACT increases when a user dials the AR activation code for a call that has an AR or automatic call back.

ARATT increases when ARRACT increases.

Associated registers
ARATT

Extension registers
None

Associated logs
None

ARRSCN

Register type
Peg

Description
ARRSCN increases when scanning resumes for AR. Scanning resumes for the originating office receives an indication that the called line is idle and then busy. The register is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
None

ARSCR

Register type
Peg

Description
ARSCR increases when the system uses AR against a line with the selective call rejection (SCR) option. The register increases when the system receives SCR indication in response to the initial AR query. ARSCR is not supported on the DMS-100G switch.

ARIMED increases when ARSCR increases.

Associated registers
ARIMED

Extension registers
None

Associated logs
None

ARSTDA

Register type
Peg

Description
ARSTDA increases when a caller receives a short-term denial announcement following an attempt to activate AR. The condition occurs if Call Forwarding is active on the line that is called. ARSTDA is not supported on the DMS-100G switch.

ARATT increases when ARSTDA increases.

Associated registers
ARATT

Extension registers
None

Associated logs
None

ARSTDT

Register type
Peg

Description
ARSTDT increases when a caller attempts to activate AR and receives short-term denial tone.

ARATT increases when ARSTDT increases.

Associated registers
ARATT

Extension registers
None

Associated logs
LINE138

ARSTR

Register type
Peg

Description
ARSTR increases when a subscriber deactivates an AR request.

Associated registers
None

Extension registers
None

Associated logs
None

ARTIME

Register type
Peg

Description
ARTIME counts AR requests that timeout during delayed processing. Timeout occurs when T10 or T6 expires, or when the maximum number of unanswered ringbacks occur.

The T6 is a duration time for ACB/AR at the originating switch that the system invokes if the called party is busy.

The T10 is a timer at the originating and the terminating switches. The switches control the total time a caller can stay in the queue for ACB/AR calls. The T6 and T10 are entered in table RESOFC.

ARTIME is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

ARTSCN

Register type
Peg

Description
ARTSCN increases when an AR request receives confirmation of terminating scanning. The register increases once for each AR request.

Associated registers
None

Extension registers
None

Associated logs
None

ARUNIV

Register type
Peg

Description
ARUNIV counts the number of times a universal user dials the AR access code.

ARATT or ARDATT increases when ARUNIV increases.

For DMS only: ARUNIV is pegged when the AR Update message to deactivate the Universal AR service is received (off-board service update request).

Associated registers
ARATT, ARDATT

Extension registers
None

Associated logs
None

ARAN

Description

OM group Automated Room and Authorization Number (ARAN) allows hotel calls requiring room number or authorization number recording to be handled via an automated system, specifically the Automated Alternate Billing Service (AABS). This feature allows institution traffic (such as law firms and hospitals) to be prompted for an authorization number on 1+ dialed calls.

ARAN provides automation via AABS for the following call types:

- 0+ hotel calls which are alternately billed and still require recording via a Hotel Billing Information Center (HOBIC) device, also including 01+ dialed overseas calls
- 1+ hotel calls, including 011+ dialed overseas calls
- 1+ institution calls, including 011+ dialed overseas calls

The following table lists the key and info fields associated with OM group ARAN.

Key field	Info field
None	None

Related functional groups

Functional group Alternate Billing Services (ABS0001) is associated with OM group ARAN.

Registers

The following table lists the registers associated with OM group ARAN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ARAN

Register name	Measures
ARANATT	ARAN Attempt
ARANSUCC	ARAN Success

ARANATT

Register type
Peg

Description
ARANATT represents the number of ARAN calls that attempted automated service.

Associated registers
ARANSUCC

Extension registers
None

Associated logs
None

ARANSUCC

Register type
Peg

Description
ARANSUCC represents the number of ARAN calls that automatically collected room or authorization numbers.

Associated registers
ARANATT

Extension registers
None

Associated logs
None

ARN

Description

OM group Automatic Recall with Name (ARN) provides information on the use of the ARN functionality. This group contains seven registers that measure occurrences during an ARN session in normal or error conditions.

The following table lists the key and info fields associated with OM group ARN:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group ARN.

Registers

The following table lists the registers associated with OM group ARN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ARN

Register name	Measures
ARNATT	ARN Request Attempt
ARNCON	ARN Connected
ARNDNERR	ARN routing Directory Number Error
ARNT1	ARN Timer1
ARNT2	ARN Timer2
ARNABDN	ARN Abandon

ARNATT

Register type
Peg

Description
ARNATT counts the activation attempts of the ARN feature. This register increases when an incoming call terminates on an ARN end user. An incoming call terminates when the line is busy while the end user is on a two-party call, and the switch activates the ARN feature.

Associated registers
None

Extension registers
None

Associated logs
None

ARNCON

Register type
Peg

Description
ARNCON increases when the ARN end user connects to the service node (SN).

Associated registers
None

Extension registers
None

ARNDNERR

Register type
Peg

Description
ARNDNERR increases when the switch can not route the call to the SN.

Associated registers
None

Extension registers
None

Associated logs
ARN600

ARNT1

Register type
Peg

Description
ARNT1 increases when the T1 timer expires.

Associated registers
None

Extension registers
None

Associated logs
ARN601

ARNT2

Register type
Peg

Description
ARNT2 increases when the T2 timer expires.

Associated registers
None

Extension registers
None

Associated logs
ARN601

ARNABDN

Register type
Peg

Description
ARNABDN increases when the calling party hangs up during an ARN session, but before the SN receives the RELEASE message.

Associated registers
None

Extension registers
None

Associated logs
None

ASUFBUS

Description

OM group Application-specific Unit (ASU) Frame Transport Bus (F-bus) (ASUFBUS) monitors transmit and receive activity between the F-buses and the ASU.

ASUFBUS contains registers that count

- packets transmitted by an ASU on each F-bus
- packets received by an ASU on each F-bus
- transmit errors by an ASU on each F-bus
- receive errors by an ASU on each F-bus
- octets transmitted by an ASU on each F-bus
- octets received by an ASU on each F-bus
- times congestion turned on by an ASU for each F-bus
- high priority messages transmitted by an ASU on each F-bus
- messages that require enqueueing by an ASU on each F-bus

The following table lists the key and info fields associated with OM group ASUFBUS.

Key field	Info field
None	pm_type is LIU7, HLIU, HSLR, SVR7, EIU, ELIU, FRIU, XLIU, APU, or VPU pm_number is an integer (0 to 999)

Related functional groups

The SuperNode DMS switch is associated with OM group ASUFBUS.

Registers

The following table lists the registers associated with OM group ASUFBUS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ASUFBUS

Register name	Measures
FB0RXERR	F-bus 0 receive errors
FB0RXOCT	F-bus 0 receive octets
FB0RXPKT	F-bus 0 receive packets
FB0TXCON	F-bus 0 transmit congestion
FB0TXENQ	F-bus 0 transmit enqueueing
FB0TXERR	F-bus 0 transmit errors
FB0TXOCT	F-bus 0 transmit octets
FB0TXPKT	F-bus 0 transmit packets
FB0TXPRI	F-bus 0 transmit priority
FB1RXERR	F-bus 1 receive errors
FB1RXOCT	F-bus 1 receive octets
FB1RXPKT	F-bus 1 receive packets
FB1TXCON	F-bus 1 transmit congestion
FB1TXENQ	F-bus 1 transmit enqueueing
FB1TXERR	F-bus 1 transmit errors
FB1TXOCT	F-bus 1 transmit octets
FB1TXPKT	F-bus 1 transmit packets
FB1TXPRI	F-bus 1 transmit priority

FB0RXERR

Register type
Peg

Description
FB0RXERR counts the packets that the ASU was not able to receive from F-bus 0 due to an error.

Associated registers
None

Extension registers
FB0RXER2

Associated logs
None

FB0RXOCT

Register type
Peg

Description
FB0RXOCT counts the octets (bytes) that the ASU receives from F-bus 0.

Associated registers
None

Extension registers
FB0RXOC2

Associated logs
None

FB0RXPKT

Register type
Peg

Description
FB0RXPKT counts the packets that the ASU receives from F-bus 0.

Associated registers
None

Extension registers
FB0RXPK2

Associated logs
None

FB0TXCON

Register type
Peg

Description
FB0TXCON counts the times the system turns on congestion for F-bus 0.

Associated registers
FB1TXCON

Extension registers
None

Associated logs
None

FB0TXENQ

Register type
Peg

Description
FB0TXENQ counts the messages on F-bus 0 that require enqueueing.

Associated registers
FB1TXENQ

Extension registers
FB0TXEN2

Associated logs
None

FB0TXERR

Register type
Peg

Description
FB0TXERR counts the packets that the ASU was not able to transmit to F-bus 0 due to an error.

Associated registers
None

Extension registers
FB0TXER2

Associated logs
None

FB0TXOCT

Register type
Peg

Description
FB0TXOCT counts the octets (bytes) that the ASU transmits to F-bus 0.

Associated registers
None

Extension registers
FB0TXOC2

Associated logs

FB0TXPKT

Register type
Peg

Description
FB0TXPKT counts the packets that the ASU transmits to F-bus 0.

Associated registers
None

Extension registers
FB0TXPK2

Associated logs
None

FB0TXPRI

Register type
Peg

Description
FB0TXPRI counts the high priority messages that the ASU transmits on F-bus 0.

Associated registers
FB1TXPRI

Extension registers
None

Associated logs
None

FB1RXERR

Register type
Peg

Description
FB1RXERR counts the packets that the ASU was not able to receive from F-bus 1 due to an error.

Associated registers
None

Extension registers
FB1RXER2

Associated logs
None

FB1RXOCT

Register type
Peg

Description
FB1RXOCT counts the octets (bytes) that the ASU received from F-bus 1.

Associated registers
None

Extension registers
FB1RXOC2

Associated logs
None

FB1RXPKT

Register type
Peg

Description
FB1RXPKT counts the packets that the ASU received from F-bus 1.

Associated registers
None

Extension registers
FB1RXPK2

Associated logs
None

FB1TXCON

Register type
Peg

Description
FB1TXCON counts the times the system turns on congestion for F-bus 1

Associated registers
FB0TXCON

Extension registers
None

Associated logs
None

FB1TXENQ

Register type
Peg

Description
FB1TXENQ counts the messages on F-bus 1 that require enqueueing.

Associated registers
FB0TXENQ

Extension registers
FB1TXEN2

Associated logs
None

FB1TXERR

Register type
Peg

Description
FB1TXERR counts the packets that the ASU was not able to transmit to F-bus 1 due to an error.

Associated registers
None

Extension registers
FB1TXER2

Associated logs
None

FB1TXOCT

Register type
Peg

Description
FB1TXOCT counts the octets (bytes) that the ASU transmits from the ASU to F-bus 1.

Associated registers
None

Extension registers
FB1TXOC2

Associated logs
None

FB1TXPKT

Register type
Peg

Description
FB1TXPKT counts the packets that the ASU transmits to F-bus 1.

Associated registers
None

Extension registers
FB1TXPK2

Associated logs
None

FB1TXPRI

Register type
Peg

Description
FB1TXPRI counts the high priority messages that the ASU transmits on F-bus 1.

Associated registers
FB0TXPRI

Extension registers
None

Associated logs
None

ASUMEMUT

Description

OM group Application-specific Unit Memory Utilization (ASUMEMUT) monitors the use of data store and program store for an ASU.

ASUMEMUT contains registers that count:

- total Data Store memory
- free Data Store memory
- total Program Store memory
- free Program Store memory

> ***Note:*** ASUMEMUT deals with static data (memory use) and must not increase by way of table OMACC. Any accumulation class on this OM group returns invalid values.

The following table lists the key and info fields associated with OM group ASUMEMUT.

Key field	Info field
None	pm_type is LIU7, HLIU, HSLR, SVR7, EIU, XLIU, APU, or VPU pm_number is an integer (1-999)

Related functional groups

SuperNode DMS switch is associated with ASUMEMUT.

Registers

The following table lists the registers associated with OM group ASUMEMUT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ASUMEMUT

Register name	Measures
ASUDSTOT	Total Data Store memory
ASUDSAVL	Free Data Store memory
ASUPSTOT	Total Program Store memory
ASUPSVL	Free Program Store memory

ASUDSTOT

Register type
Peg

Description
ASUDSTOT contains the number of Kbytes of DS memory.

Associated registers
None

Extension registers
None

Associated logs
None

ASUDSAVL

Register type
Peg

Description
ASUDSAVL contains the number of Kbytes of DS memory available for use.

Associated registers
None

Extension registers
None

Associated logs
None

ASUPSTOT

Register type
Peg

Description
ASUPSTOT contains the number of Kbytes of PS memory.

Associated registers
None

Extension registers
None

Associated logs
None

ASUPSVL

Register type
Peg

Description
ASUPSTOT contains the number of Kbytes of PS memory.

Associated registers
None

Extension registers
None

Associated logs
None

ATRK

Description

OM group Analog Call Management Services Trunks (ATRK-Canada only) counts errors that occur after a transaction capability application part (TCAP) calling line identification (CLID) message has been matched to a per-trunk signaling (PTS) trunk.

The following table lists the key and info fields associated with OM group ATRK.

Key field	Info field
Trunk group CLLI	OM2TRKINFO consists of three parts. These parts include trunk direction, number of trunk circuits in the group, and number of working trunk circuits.

Related functional groups

The Stored Program Control-Call Management Services (SPC-CMS) functional group is associated with the OM group ATRK-Canada only.

Registers

The following table lists the registers associated with OM group ATRK-Canada only and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ATRK-Canada only

Register name	Measures
ATRKDIG	ATRK digit mismatch
ATRKEXP	ATRK calling line identification expired
ATRKNOC	ATRK no calling line identification
ATRKOUT	ATRK trunk out of service
ATRKOVR	Calling line identification
ATRKSUCC	ATRK successfully attached CLID data

ATRKDIG

Register type
Peg

Description
ATRKDIG increased when the last four digits of the called number in the TCAP CLID message did not match. These four digits do not match the last four digits of the called number that the enhanced stored program control (ESPC) switch outpulses.

When the voice call arrives on the associated PTS trunk, the voice call continues without CLID.

Associated registers
None

Extension registers
None

Associated logs
ACMS104

ATRKEXP

Register type
Peg

Description
ATRKEXP increments when an incoming call does not remove from a queue CLID data enqueued against a trunk circuit. This incoming call must occur within the time period specified in office parameter SPCCLITIMEOUT in table OFCENG.

If the voice call arrives after the CLID data expires, the following actions occur. The call continues without CLID and register ATRKNOC counts this call.

Associated registers
ATRKNOC

Extension registers
None

Associated logs
ACMS102

ATRKNOC

Register type
Peg

Description
ATRKNOC increments if the system does not find a TCAP CLID message enqueued against a stored program control trunk. This system action occurs when the system receives a call on the trunk.

The call continues without CLID data.

Associated registers
None

Extension registers
None

Associated logs
None

ATRKOUT

Register type
Peg

Description
ATRKOUT counts TCAP calling line identification messages received for a trunk. The state of the trunks precludes a call routing over the trunk. No CLID data is enqueued against this trunk.

The following trunk states prevent a CLID message from being enqueued:

- offline
- manual busy
- peripheral module busy
- remote busy
- system busy
- carrier failure
- deloaded
- seized

Associated registers
None

Extension registers
None

Associated logs
ACMS101

ATRKOVR

Register type
Peg

Description
ATRKOVR increments when a CLID message is enqueued against a trunk circuit. This trunk circuit is a trunk circuit that already has CLID data enqueued against the trunk unit.

The system loses the earlier enqueued CLID message when information overwrites the message in the new TCAP CLID message.

The next incoming voice call on the associated PTS trunk removes the new CLID data from a queue.

Associated registers
None

Extension registers
None

Associated logs
ACMS103

ATRKSUCC

Register type
Peg

Description
ATRKSUCC increases when a voice call on a PTS trunk correctly attaches CLID data.

When the CLID data attaches to the call, the call continues.

Associated registers
None

Extension registers
None

Associated logs
None

ATTAMA

Description

OM group AT&T Automatic Message Accounting (ATTAMA) counts the different types of calls that pass through an office. Three separate registers count originating, billable, and non billable calls. Other registers in ATTAMA break down calls by call class and call disposition.

ATTAMA counts the following call classes:

- station paid
- directory assistance (DA) 411
- DA 555-1212
- tracer, transfer, and time change
- long duration
- short supervisory transitions (SST)
- other (three-way, call forward, study)

Short supervisory transitions (SST) are on-off-on switchhook transitions with less than the minimum call duration. Office parameter MINIMUM_CHARGE_DURATION in table OFCENG defines the minimum call duration.

ATTAMA counts the following call dispositions:

- call records for answered calls
- lost records for answered calls
- estimated disconnect calls
- lost answer message calls

Counts in registers for SSTs can indicate false call attempts. Lost automatic message accounting (AMA) record counts can indicate that not enough AMA resources are present.

The following table lists the key and info fields associated with OM group ATTAMA.

Key field	Info field
None	None

The FORMAT in table CRSFMT must be set to BCFMT.

The following options in table AMAOPTS affect the counts in ATTAMA registers: DA411, CHG411, DA555, CHG555, UNANS_TOLL, SST, LONG_CALL, TRACER, TIMECHANGE, UNANS_LOCAL, CALL_FWD, and TWC

Related functional groups

The following functional groups are associated with OM group ATTAMA:

- MDC Meridian Digital Centrex
- POTS Plain ordinary telephone service

Registers

The following table lists the registers associated with OM group ATTAMA and what they measure. For a description of a register, click on the register name.

Registers for OM group ATTAMA (Sheet 1 of 3)

Register name	Measures
AMANS	Answered incoming billable calls
AMDA411	Billable directory assistance 411 calls
AMDA555	Billable directory assistance 555-1212 calls
AMED411	Answered directory assistance 411 calls with an estimated disconnect time
AMED555	Answered directory assistance 555-1212 billable with an estimated disconnect time
AMEDOTHR	Three-way calling, call forwarding, and study calls with estimated disconnect times
AMEDSTPD	Answered station-paid calls with an estimated disconnect time
AMLTLONG	Lost A and B long-duration records
AMLT411	Lost directory assistance 411 billable call records
AMLT555	Lost DA 555-1212 billable call records

Registers for OM group ATTAMA (Sheet 2 of 3)

Register name	Measures
AMLTOTHR	Lost three-way calling use, call forwarding use, study and short supervisory transition records
AMLTSTPD	Lost records for answered station-paid calls
AMLTTRCR	Lost tracer, transfer, and time change records
AMNAOTHR	Three-way calling, call forwarding, and study calls with lost answer message
AMNA411	Answered directory assistance 411 billable calls with lost answer messages
AMNA555	Answered directory assistance 555-1212 billable calls with lost answer messages
AMNASTPD	Answered station-paid calls with lost answer message
AMNOTRMT	Incoming non-AMTRMT calls
AMORIGS	Intertoll and centralized AMA call originations
AMRCLONG	The A and B long-duration call records
AMRC411	Call records for answered directory assistance 411 calls
AMRC555	Call records for answered directory assistance 555-1212 calls
AMRCOTHR	Records that are put on file
AMRCSST	The AMA short supervisory transition records
AMRCSTPD	Answered station-paid call records
AMRCTRCR	Tracer, transfer, and time change records
AMSST	The AMF short supervisory transitions

Registers for OM group ATTAMA (Sheet 3 of 3)

Register name	Measures
AMTRMT	Incoming billable calls
AMUNANS	Unanswered AMTRMT call

AMANS

Register type
Peg

Description
AMANS counts incoming billable calls that receive answer messages.

Associated registers
None

Validation formulas
The following formulas relate to AMANS and its associated registers:

- In offices with feature package NTX098AA Bellcore CAMA Format: AMANS = AMRCSTPD + AMRC411 + AMRC555 + ATTAMA_AMLTSTPD + AMLT411 + AMLT555
- In offices with feature package NTX159AA Bellcore LAMA Format: AMANS = AMRCSTPD + AMRC411 + AMRC555 + AMLTSTPD + AMLT411 + ATTAMA_AMLT555 + ATTLAMA_ AMRCMR + ATTLAMA_AMRCIWAT + ATTLAMA_AMRCOWAT + ATTLAMA_AMLTMR + ATTLAMA_AMLTIWAT + ATTLAMA_AMLTOWAT

Extension registers
None

Associated logs
AMAB117

AMDA411

Register type
Peg

Description
AMDA411 counts billable directory assistance (DA) 411 calls after digit collection. The register increases only when the DA411 and CHG411 options in table AMAOPT are ON.

Associated registers
None

Validation formula
AMDA411 = AMRC411 + AMED411 + AMNA411 + AMLT411

Extension registers
None

Associated logs
AMAB117

AMDA555

Register type
Peg

Description
AMDA555 counts billable directory assistance 555-1212 calls after digit collection. The register does not include numbering plan area (NPA) 555-1212 calls. AMDA555 increases only when the DA 555 and CHG 555 options in table AMAOPTS are ON.

Associated registers
None

Validation formula
AMDA555 = AMRC555 + AMED555 + AMNA555 + AMLT555

Extension registers
None

Associated logs
AMAB117

AMED411

Register type
Peg

Description
AMED411 counts answered directory assistance (DA) 411 calls that have an estimated disconnect time. AMED411 increases only when options DA411 and CHG411 in table AMAOPTS are ON.

AMED411 counts estimated disconnect calls when the system receives an origination on a trunk involved in a call. The condition occurs when

one or both parties disconnect during a warm restart, and the system loses the disconnect message.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMED555

Register type
Peg

Description
AMED555 counts answered directory assistance (DA) 555-1212 calls that have an estimated disconnect time. AMED555 increases only when options DA555 and CHG555 in table AMAOPTS are ON.

AMED555 counts estimated disconnect calls when the system receives an origination on a trunk involved in a call. The condition occurs when one or both parties disconnect during a warm restart, and the system loses the disconnect message.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMEDOTHR

Register type
Peg

Description
AMEDOTHR increases when a user makes non-billable call, including the following call types:

- directory assistance (DA) 411 calls made when option DA411 is ON and CHG411 is OFF directory assistance (DA) 411 calls made when DA555 is ON and CHG555 is OFF in table AMAOPTS.
- directory assistance (DA) 411 calls made when DA555 is ON and CHG555 is OFF in table AMAOPTS.
- calls that generate records for analysis, and not for billing
- three-port conference calls when option TWC in table AMAOPTS is ON
- calls when the subscriber deactivates the Call Forwarding feature and the call forward option in table AMAOPTS is ON

AMEDOTHR does not count Meridian Digital Centrex (MDC) six-port conference calls.

The register counts estimated disconnect calls when the system receives origination on a trunk involved in a call. The condition occurs when one or both parties disconnect during a warm restart, and the system loses the disconnect message.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMEDSTPD

Register type
Peg

Description
AMEDSTPD counts answered station-paid calls that have an estimated disconnect time. The register counts estimated disconnect calls when the system receives an origination on a trunk involved in a call. The condition occurs when one or both parties disconnect during a warm restart, and the system loses the disconnect message.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMLTLONG

Register type
Peg

Description
AMLTLONG counts A and B long-duration call records that the system loses. The system loses call records when:

- a tape unit is not available for a record output to the device independent recording package (DIRP) buffer.
- a software recording unit is not available for a call record.

Recognition and continuation records are A and B records, and indicate that a long-duration call is in progress. The long-duration call audit (LONGCALL) produces long-duration call records every 24 hours.

Disconnect records (C and D records) indicate that a long-duration call is complete. The C and D records are treated the same as station paid records.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMLT411

Register type
Peg

Description
AMLT411 counts directory assistance (DA) 411 billable call records that the system loses. The register increases when options DA411 and

CHG411 are set to ON in table AMAOPTS. The system loses call records

- when a tape unit is not available for a record output to the device independent recording package (DIRP) buffer
- when a software recording unit is not available for a call record

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMLT555

Register type
Peg

Description
AMLT555 counts DA 555-1212 call records that the system loses, *excluding* numbering plan area (NPA)-555-1212 calls. The system loses call records when:

- a tape unit is not available for a record output to the DIRP buffer
- a software recording unit is not available for a call record

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMLTOTHR

Register type
Peg

Description
AMLTOTHR counts lost records for non-billable calls including the following types:

- directory assistance (DA) 411 calls made when option DA411 is ON and CHG411 is OFF
- directory assistance (DA) 411 calls made when DA555 is ON and CHG555 in table AMAOPTS is OFF
- calls that generate records for analysis not for billing
- three-port conference calls when option TWC in table AMAOPTS is ON
- calls when the customer deactivates the Call Forwarding feature and the call forward option in table AMAOPTS is ON
- short supervisory transitions (SST) calls

The system loses call records

- when a tape unit is not available for a record output to the DIRP buffer
- when a software recording unit is not available for a call record

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMLTSTPD

Register type
Peg

Description
AMLTSTPD counts call records for answered station-paid calls that the system loses. The system loses call records

- when a tape unit is not available for a record output to the DIRP buffer
- when a software recording unit is not available for a call record

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMLTTRCR

Register type
Peg

Description
AMLTTRCR counts tracer, transfer, and time change records that the system loses. Tracer records are administrative AMA records that contain ATTAMA and ATTLAMA registers in offices with feature package NTX159AA Bellcore LAMA Format.

The system produces:

- a periodic OM tracer when the TRACER option in table AMAOPTS is ON
- a transfer record when AMA tapes are mounted or removed
- a time change record when the TIMECHANGE option in table AMAOPTS is ON

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMNAOTHR

Register type
Peg

Description
AMNAOTHR counts non-billable calls that lost the answer message. The AMNAOTHR register counts the following call types:

- directory assistance (DA) 411 calls made when option DA411 is ON and CHG411 is OFF
- directory assistance DA555 is ON and CHG555 is OFF in table AMAOPTS
- calls that generate records for analysis, not for billing

- three-port conference calls when option TWC in table AMAOPTS is ON
- calls when the subscriber deactivates the Call Forwarding feature and the call forward option is ON in table AMAOPTS

The system loses an answer message when the AMA recording office receives a disconnect message from an answered call before the system receives an answer message first. Under these conditions the system produces no AMA record.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMNA411

Register type
Peg

Description
AMNA411 counts answered directory assistance (DA) 411 calls with a lost answer message. The AMNA411 register increases when options DA411 and CHG411 in table AMAOPTS are ON.

The system loses an answer message when the AMA recording office receives a disconnect message from an answered call before the office receives an answer message. Under these conditions the system does not produce an AMA record.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMNA555

Register type
Peg

Description
AMNA555 counts directory assistance (DA) 555-1212 calls with a lost answer message. The AMNA555 register increases only when options DA555 and CHG555 are set to ON in table AMAOPTS.

The system loses an answer message when the AMA recording office receives a disconnect message from an answered call. When the system receives the disconnect message, the system does not receive an answer message. Under these conditions, the system does not produce an AMA record.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMNASTPD

Register type
Peg

Description
AMNASTPD counts answered station-paid calls that lost the answer message.

The system loses an answer message when the AMA recording office receives a disconnect message from an answered call. The system receives the disconnect message before the system receives an answer message. Under these conditions the system does not produce an AMA record.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMNOTRMT

Register type
Peg

Description
AMNOTRMT counts incoming non-billable (AMTRMT) calls, after called party digit collection.

Associated registers
None

Validation formula
AMNOTRMT = AMRCOTHR + AMEDOTHR + AMNAOTHR + AMLTOTHR

Extension registers
None

Associated logs
AMAB117

AMORIGS

Register type
Peg

Description
AMORIGS counts intertoll and centralized AMA (CAMA) call originations, after called party digit collection. AMORIGS does not count calls that do not complete digit collection and calls that abort before digit collection.

Offices with feature package NTX159AA Bellcore LAMA Format include line call originations.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMRCLONG

Register type
Peg

Description
AMRCLONG counts long-duration call records. AMRCLONG increases when the long-duration call audit (LONGCALL) option in table AMAOPTS is ON.

The LONGCALL produces long-duration call records every 24 hours. Recognition and continuation (A and B) records indicate that a long-duration call is in progress.

Disconnect (C and D) records indicate that a long duration call is complete. The C and D records are treated the same as station-paid records.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMRC411

Register type
Peg

Description
AMRC411 counts call records for billable answered directory assistance (DA) 411 calls. The AMRC411 register increases only when options DA411 and CHG411 are ON in table AMAOPTS.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMRC555

Register type
Peg

Description
AMRC555 counts call records for billable directory assistance (DA) 555-1212 calls. The AMRC555 register does not count numbering plan area (NPA) 555-1212 calls. The AMRC555 register increases only when options DA555 and CHG555 in table AMAOPTS are ON.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMRCOTHR

Register type
Peg

Description
AMRCOTHR counts records that the system generates for non-billable calls. AMRCOTHR counts the following call types:

- directory assistance (DA) 411 calls made when option DA411 is ON and CHG411 is OFF
- directory assistance (DA) 411 calls made when DA555 is ON and CHG555 is OFF in table AMAOPTS
- calls that generate records for analysis not for billing
- three-port conference calls when option TWC in table AMAOPTS is ON
- calls when the customer deactivates the Call Forwarding feature and the call forward option in table AMAOPTS is ON
- short supervisory transitions (SST) calls

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMRCSST

Register type
Peg

Description
AMRCSST counts short supervisory transition (SST) records that the system produces for output on the AMA file. AMRCSST increases only when the SST option in table AMAOPTS is ON.

The SSTs are on-off-on switchhook transitions with less than the minimum call duration. Parameter MINIMUM_CHARGE_DURATION in table OFCENG defines minimum call duration.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMRCSTPD

Register type
Peg

Description
AMRCSTPD counts answered station-paid call records for billing. AMRCSTPD does not count short supervisory transition (SST) records and A and B long-duration records.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMRCTRCR

Register type
Peg

Description
AMRCTRCR counts tracer, transfer, and time change records. Tracer records are administrative AMA records that contain ATTAMA and ATTLAMA registers in offices with feature package NTX159AA Bellcore LAMA Format. The system produces:

- the periodic OM tracer when the option TRACER in table AMAOPTS is ON
- a transfer record when you mount or remove AMA tapes
- a time change record only when the option TIMECHANGE in table AMAOPTS is ON
- a lost record (SwEr AMAPROC, TEXT= AMA - LOST RECORD) if no room is left in the AMA recording units buffers

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMSST

Register type
Peg

Description
AMSST counts calls on which a minimum of one short supervisory transition (SST) occurs.The register increases only when the SST option in table AMAOPTS is ON. SSTs are on-off-on switchhook transitions with less than the minimum call duration. Parameter MIMINUM_CHARGE_DURATION in table OFCENG defines minimum call duration.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

AMTRMT

Register type
Peg

Description
AMTRMT counts incoming billable calls after called-party digit collection, including all charged directory assistance (DA) calls. The AMA treatment applies to the following types of calls that the system records for billing and counts in AMATRMT:

- normal toll calls, for example, incoming calls on centralized AMA (CAMA) trunks
- toll calls and message rate calls from lines, if feature package NTX159AA Bellcore LAMA Format is present
- directory assistance calls that the system charges when AMA options DA555 and CHG555 are ON. DA 555-1212 calls (excluding numbering plan area [NPA] 555-1212 calls, which are station-paid calls) are examples of these calls.
- DA411 calls when AMA options DA411 and CHG411 are ON. A different office can bill an incoming call on a CAMA trunk. The AMTRMT includes these calls and counts them early in the call process.

Associated registers
None

Validation formulas
The following formulas relate to AMANS and its associated registers:

- In offices with feature package NTX098AA Bellcore CAMA Format: AMTRMT = AMRCSTPD + AMEDSTPD + AMNASTPD + AMLTSTPD + AMRC411 + AMED411 + AMNA411 + AMLT411 + AMRC555 + AMED555 + AMNA555 + AMLT555
- In offices with feature package NTX159AA Bellcore LAMA Format: AMTRMT = AMRCSTPD + AMEDSTPD + AMNASTPD + AMLTSTPD + AMRC411 + AMED411 + AMNA411 + AMLT411 + AMRC555 + AMED555 + AMNA555 + AMLT555 + ATTLAMA_AMRCMR + ATTLAMA_AMEDMR + ATTLAMA_AMNAMR + ATTLAMA_AMLTMR + ATTLAMA_AMRCIWAT + ATTLAMA_AMEDIWAT + ATTLAMA_AMNAIWAT + ATTLAMA_AMLTIWAT + ATTLAMA_AMRCOWAT + ATTLAMA_AMEDOWAT + ATTLAMA_AMNAOWAT + ATTLAMA_AMLTOWAT

Extension registers
None

Associated logs
AMAB117

AMUNANS

Register type
Peg

Description
AMUNANS increases when a call disconnects and the system receives no answer message. For offices with feature package NTX159AA Bellcore LAMA Format, AMUNANS increases if options UNANSTOLL and UNASLOCAL in table AMAOPTS are ON.

Associated registers
None

Extension registers
None

Associated logs
AMAB117

ATTAMA2

Description

OM group AT&T Automatic Message Accounting (ATTAMA) counts the different types of calls that pass through an office. Three separate registers count originating, billable, and non billable calls. For more information on ATTAMA, refer to ATTAMA.

ATTAMA2 is an overflow extension group for the following registers in OM group ATTAMA:

- AMANS
- AMUNANS

The register value for ATTAMA is 0 to 32767. When the ATTAMA registers reach 32767 and overflow, it increments the overflow registers in ATTAMA2. ATTAMA then resets to zero (0) and resumes incrementing. The registers in ATTAMA2 also indicate how many times they overflow.

The following table lists the key and info fields associated with OM group ATTAMA2. ATTAMA can handle 32767 pegs for one peg in ATTAMA2.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group ATTAMA2.

Registers

The following table lists the registers associated with OM group ATTAMA2 and what they measure. For a description of a register, click on the register name.

Registers for OM group ATTAMA2

Register name	Measures
AMANS2	Answered incoming billable calls
AMUNANS2	Unanswered AMTRMT calls

AMANS2

Register type
Peg

Description
AMANS2 counts incoming billable calls that receive answer messages.

This register applies only to DMS.

Associated registers
None

Validation formula
ATTAMA_AMANS - ATTAMA2_AMANS2

Extension registers
None

Associated logs
None

AMUNANS2

Register type
Peg

Description
AMUNANS2 increases when a call disconnects and the system receives no answer message.

This register applies only to DMS.

Associated registers
None

Validation formula
ATTAMA_AMUNANS - ATTAMA2_AMUNAS2

Extension registers
None

Associated logs
None

ATTLAMA

Description

OM group AT&T Local Automatic Message Accounting (ATTLAMA) provides information on different types of calls that pass through an office. Registers count message rate, inward wide-area telephone service (INWATS) calls, and outward wide-area telephone service (OUTWATS) calls. Registers provide the counts according to the disposition of these services.

ATTLAMA counts the following call dispositions:

- call records for answered calls
- lost records for answered calls
- estimated disconnect calls
- lost answer message calls

The following table lists the key and info fields associated with OM group ATTLAMA.

Key field	Info field
None	None

The FORMAT option in table CRSFMT must be set to BCFMT.

Options INWATS and OUTWATS in table AMAOPTS must be ON for registers to increase.

Related functional groups

The following functional groups are related to OM group ATTLAMA:

- MDC
- POTS

Registers

The following table lists the registers associated with OM group ATTLAMA and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ATTLAMA

Register name	Measures
AMEDIWAT	INWATS call with an estimated disconnect time
AMEDMR	Message rate calls with an estimated disconnect time
AMEDOWAT	OUTWATS calls with estimated disconnect time
AMLTIWAT	Lost INWATS calls
AMLTMR	Lost message rate calls
AMLTOWAT	Lost OUTWATS calls
AMNAIWAT	No answer INWATS calls
AMNAMR	No answer message rate calls
AMNAOWAT	No answer OUTWATS calls
AMRCIWAT	Recorded INWATS calls
AMRCMR	Recorded message rate calls
AMRCOWAT	Recorded OUTWATS calls

AMEDIWAT

Register type
Peg

Description
AMEDIWAT counts originations that the system receives on active INWATS calls. A warm restart causes originations active INWATS calls

receive. Originations often occur because of a warm restart during disconnect.

Option INWATS in table AMAOPTS must be set to ON for register AMEDIWAT to increase.

Associated registers
None

Extension registers
None

Associated logs
None

AMEDMR

Register type
Peg

Description
AMEDMR counts originations that the system receives on active multi-unit message rate calls. Originations often occur because of a warm restart during disconnect.

Associated registers
None

Extension registers
None

Associated logs
None

AMEDOWAT

Register type
Peg

Description
AMEDOWAT counts originations that the system receives on active OUTWATS calls. Originations often occur because of a warm restart during disconnect.

You must set the option OUTWATS in table AMAOPTS to ON for register OUTWATS to increase.

Associated registers
None

Extension registers
None

Associated logs
None

AMLTIWAT

Register type
Peg

Description
AMLTIWAT counts INWATS calls that the system loses for one of the following reasons:

- an attempt to record the call without an automatic message accounting (AMA) tape occurs
- a failure to get a BC_LAMA_UNIT occurs

Office parameter NUM_OF_BC_LAMA REC_UNITS in table OFCENG controls the supply of recording units.

Option INWATS in table AMAOPTS must be set to ON for register ALMTIWAT to increase.

Associated registers
EXT_EXTOVFL, which counts calls that cannot be completed because there are not enough specific types of recording units

Extension registers
None

Associated logs
None

AMLTMR

Register type
Peg

Description
AMLTMR counts multi-unit message rate calls that the system loses for one of the following reasons:

- an attempt to record the call without an automatic message accounting (AMA) tape occurs
- failure to get a BC_LAMA_REC_UNIT occurs

Office parameter NUM_OF_OF_BC_LAMA_UNITS in table OFCENG controls the supply of recording units.

Associated registers
EXT_EXTOVFL, which counts calls that cannot be completed because not enough specific types of recording units are present

Extension registers
None

Associated logs
None

AMLTOWAT

Register type
Peg

Description
AMLTOWAT increases when the system loses an OUTWATS call for one of the following reasons:

- an automatic message accounting (AMA) tape to record the call is not available
- a BC_LAMA_UNIT is not available

Office parameter NUM_OF_BC_LAMA_UNITS in table OFCENG controls the supply of recording units.

Option OUTWATS in table AMAOPTS must be set to ON for register AMLTOWAT OUTWATS increases this register.

Associated registers
EXT_EXTOVFL, which counts calls that cannot be completed because not enough specific types of recording units are present

Extension registers
None

Associated logs
None

AMNAIWAT

Register type
Peg

Description
AMNAIWAT counts answered INWATS calls that disconnect without receiving an answer message. A warm restart during answer often disconnects INWATS calls.

You must set the option INWATS in table AMAOPTS to ON, for register AMNAIWAT to increase.

Associated registers
None

Extension registers
None

Associated logs
None

AMNAMR

Register type
Peg

Description
AMNAMR counts answered multi-unit message rate calls that disconnect without receiving an answer message. A warm restart during answer often disconnects INWATS calls.

Associated registers
None

Extension registers
None

Associated logs
None

AMNAOWAT

Register type
Peg

Description
AMNAOWAT counts answered OUTWATS calls that disconnect without receiving an answer message. A warm restart during answer often disconnects OUTWATS calls.

You must set the option OUTWATS in table AMAOPTS to ON for register AMNAOWAT to increase.

Associated registers
None

Extension registers
None

Associated logs
None

AMRCIWAT

Register type
Peg

Description
AMRCIWAT counts INWATS calls that the system writes to the automatic message accounting (AMA) tape.

Option INWATS in table AMAOPTS must be set to ON for the AMRCIWAT to increase.

Associated registers
None

Extension registers
None

Associated logs
None

AMRCMR

Register type
Peg

Description
AMRCMR counts multi-unit message rate calls that the system writes to the automatic message accounting (AMA) tape.

Associated registers
None

Extension registers
None

Associated logs
None

AMRCOWAT

Register type
Peg

Description
AMRCOWAT increases when the system writes on OUTWATS call to the automatic message accounting (AMA) tape.

You must set the option OUTWATS in table AMAOPTS to ON for register AMRCOWAT to increase.

Associated registers
None

Extension registers
None

Associated logs
None

AUDSRVS

Description

OM group Audio Node Service Circuits (AUDSRVS) tracks the use of internal resources associated with the announcement, 3- and 6-port conference circuits allocated for each Audio Server node. *This OM group applies only to DMS.*

The following table lists the key and info fields associated with OM group AUDSRVS.

Key field	Info field
None The index represents the internal node number assigned to the Audio Server.	AUDSRVS_OM_INFO_TYPE Consists of the PM type (AUD) and the external PM number of the Audio Server. The number of announcement ports, 3- and 6-port conference circuit ports are allocated to the node. The number of ports allocated corresponds to the number provisioned in table SERVSINV.

Related functional groups

There are no functional groups associated with OM group AUDSRVS.

Registers

The following table lists the registers associated with OM group AUDSRVS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AUDSRVS (Sheet 1 of 2)

Register name	Measures
ANNCINSU	Announcement port in-service usage
ANNCOOSU	Announcement port out-of-service usage
ANNCTRU	Announcement port traffic usage
ANNCFTRU	Announcement port fast traffic usage
CNF3INSU	3-port conference circuit in-service usage

Registers for OM group AUDSRVS (Sheet 2 of 2)

Register name	Measures
CNF3OOSU	3-port conference circuit out-of-service usage
CNF3TRU	3-port conference circuit traffic usage
CNF3FTRU	3-port conference circuit fast traffic usage
CNF6INSU	6-port conference circuit in-service usage
CNF6OOSU	6-port conference circuit out-of-service usage
CNF6TRU	6-port conference circuit traffic usage
CNF6FTRU	6-port conference circuit fast traffic usage

ANNCINSU

Register type
Usage

Scan rate
100 seconds

Description
ANNCINSU records the number of announcement port resources on the Audio Server that are in service. The system scans Audio Server nodes every 100 seconds. The sum of in-service (ANNCINSU) and out-of-service (ANNCOOSU) can differ from the number of resources allocated.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
PM720

ANNCOOSU

Register type
Usage

Scan rate
100 seconds

Description
ANNCOOSU records the number of announcement port resources on the Audio Server that the GWC auto-discovery mechanism removes from service. The system scans Audio Server nodes every 100 seconds. The sum of in-service (ANNCINSU) and out-of-service (ANNCOOSU) can differ from the number of resources allocated.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
PM720

ANNCTRU

Register type
Usage

Scan rate
100 seconds

Description
ANNCTRU records the number of announcement port resources on the Audio Server that are call processing busy. The system scans Audio Server nodes every 100 seconds.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

ANNCFTRU

Register type
Usage

Scan rate
100 seconds

Description
ANNCFTRU records the number of announcement port resources on the Audio Server that are in a call processing busy state. The system scans Audio Server nodes every 100 seconds.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

CNF3INSU

Register type
Usage

Scan rate
100 seconds

Description
CNF3INSU records the number of 3-port conference circuit ports on the Audio Server that are in-service. The register value reflects the number of in-service circuits multiplied by 3. The system scans Audio Server nodes every 100 seconds. The sum of in-service (CNF3INSU) and out-of-service (CNF3OOSU) ports can differ from the number of resources allocated.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
PM720

CNF3OOSU

Register type
Usage

Scan rate
100 seconds

Description
NF3OOSU records the number of 3-port conference circuit ports on the Audio Server that are removed from service by the GWC auto-discovery mechanism. The system scans Audio Server nodes every 100 seconds. The register value reflects the number of out-of-service circuits multiplied by 3. The sum of in-service (CNF3INSU) and out-of-service (CNF3OOSU) ports can differ from the number of resources allocated.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
PM720

CNF3TRU

Register type
Usage

Scan rate
100 seconds

Description
CNF3TRU records the number of 3-port conference circuit ports on the Audio Server that are call processing busy. The register value reflects the number of call processing busy circuits multiplied by 3. The system scans Audio Server nodes every 100 seconds.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

CNF3FTRU

Register type
Usage

Scan rate
100 seconds

Description
CNF3FTRU records the number of 3-port conference circuit ports on the Audio Server that are in a call processing busy state. The register value reflects the number of call processing busy circuits multiplied by 3. The system scans Audio Server nodes every 100 seconds.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

CNF6INSU

Register type
Usage

Scan rate
100 seconds

Description
CNF6INSU records the number of 6-port conference circuit ports on the Audio Server that are in-service. The register value reflects the number of in-service circuits multiplied by 6. The system scans Audio Server nodes every 100 seconds. The sum of in-service (CNF6INSU) and

out-of-service (CNF6OOSU) ports can differ from the number of resources allocated.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
PM720

CNF6OOSU

Register type
Usage

Scan rate
100 seconds

Description
CNF6OOSU records the number of 3-port conference circuit ports on the Audio Server that are removed from service by the GWC auto-discovery mechanism. The register value reflects the number of out-of-service circuits multiplied by 3. The system scans Audio Server nodes every 100 seconds. The sum of in-service (CNF6INSU) and out-of-service (CNF6OOSU) ports can differ from the number of resources allocated.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
PM720

CNF6TRU

Register type
Usage

Scan rate
100 seconds

Description
CNF6TRU records the number of 6-port conference circuit ports on the Audio Server that are call processing busy. The register value reflects the number of call processing busy circuits multiplied by 6. The system scans Audio Server nodes every 100 seconds.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

CNF6FTRU

Register type
Usage

Scan rate
100 seconds

Description
CNF6FTRU records the number of 6-port conference circuit ports on the Audio Server that are call processing busy. The register value reflects the number of call processing busy circuits multiplied by 6. The system scans Audio Server nodes every 100 seconds.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

AUTH

Description

This OM group captures counts for the authentication service. When the authentication service is configured to authenticate a specific message this OM group will track counts for authentication attempts, authentication successes and authentication failures.

The following table lists the key and info fields associated with OM group AUTH.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group AUTH:

- Session Manager

Registers

The following table lists the registers associated with OM group AUTH and what they measure. For a description of a register, click on the register name.

Registers for OM group AUTH

Register name	Measures
attempts	Authentication attempts
success	Successful authorizations
failure	Authorization failures

attempts

Register type
Peg

Description
Authentication Attempts

Associated registers
success, failure

Extension registers
None

Associated logs
None

success

Register type
Peg

Description
Successful Authorization

Associated registers
attempts, failure

Extension registers
None

Associated logs
None

failure

Register type
Peg

Description
Authorization Failure

Associated registers
attempts, success

Extension registers
None

Associated logs
None

AUTSPID

Description

OM group Automated SPID (AUTSPID) measures usage data associated with the AUTSPID feature. Currently, this measurement occurs for each XPM only for North American ISDN BRIFS sets.

AUTSPID records the following parameters:

- number of valid Automated SPID requests received (ATSPDREQ)
- number of successful Automated SPID requests (SUCCREQS)

In addition, the AUTSPID OM group records the following AUTOMATED SPID failures:

- number of Automated SPID failures due to a SPID being unavailable on the interface (SPDUNVAL)
- number of Automated SPID failures due to no initializing LTID or terminal service profile (TSP) provisioned on the interface (NO_TSP)
- number of Automated SPID failures due to unnecessary Automated SPID requests (UNSPDREQ)

Note: The system tags as a UNSPDREQ attempt any subsequent AUTSPID request by an LTID that someone has initialized already by means of an AUTSPID.

The following table lists the key and info fields associated with OM group AUTSPID.

Key field	Info field
AUTSPID	An example of the information field associated with each XPM is shown as the sequential entry of each XPM followed by its name and number.

The following table shows example content of the Info field of the OM group AUTSPID.

Example of Info field in OM group AUTSPID report

Entry number	PM name	PM number
23	LGC	11
24	SMA	2

Related functional groups

The following functional groups are related to OM group AUTSPID:

- ISDN BRI
- LTC
- LGC
- SMA
- RCC
- RCC2
- WSMU
- SMA2

Registers

The following table lists the registers associated with OM group AUTSPID and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group AUTSPID

Register name	Measures
ATSPDREQ	Automated SPID Requests Received
SUCCREQS	Successful Automated SPID Requests
SPDUNVL	SPID Unavailable
NO_TSP	No TSP Provisioned
UNSPDREQ	Unnecessary Automated SPID Request

ATSPDREQ

Register type
Peg

Description
ATSPDREQ counts the number of valid Automated SPID requests received on an XPM basis. The system defines a valid request as (01010101010101).

Associated registers
None

Extension registers
None

Associated logs
None

SUCCREQS

Register type
Peg

Description
SUCCREQS counts the number of Automated SPID requests that are successfully processed and a SPID sent to the requesting LTID.

Associated registers
None

Extension registers
None

Associated logs
None

SPDUNVL

Register type
Peg

Description
SPDUNVL counts the number of Automated SPID requests failures due to a SPID not being available on the interface. Typically, this is the case where all the SPIDS are in use and a new request comes in from the interface.

Associated registers
None

Extension registers
None

Associated logs
None

NO_TSP

Register type
Peg

Description
NO_TSP counts the number of Automated SPID requests failures due to an initializing BRAFS LTID not being provisioned on the interface.

Associated registers
None

Extension registers
None

Associated logs
None

UNSPDREQ

Register type
Peg

Description
UNSPDREQ counts the number of Automated SPID requests that are not necessary. An Automated SPID defines UNSPDREQ as a request to have the following rejection criteria:

- The number of Auto-SPID requests per terminal exceeds three attempts per ten minute period.
- The switch is already processing a parameter download request.
- The switch is already processing a layer three request.
- The switch is already processing an Auto-SPID request.

Associated registers
None

Extension registers
None

Associated logs
None

BCAPCG

Description

OM group Bearer Capability Per Customer Group (BCAPCG) collects the operational measurements for bearer capability (BC) for each customer group. BCAPCG increases when the call originator does not succeed in reaching the desired call appearance(s) because the BC is incompatible. The system routes the originator to CALL_NOT_ACCEPTED (CNAC) treatment.

The following table lists the key and info fields associated with OM group BCAPCG.

Key field	Info field
IBNG_INDEX (in table CUSTHEAD)	OMIBNGINFO is the name of the customer group entered in table CUSTHEAD.

Translations require table CUSTHEAD, which lists the following information for each customer group:

- the customer or feature names for blocks of data entered in table IBNXLA
- the name for the block of data that specifies digit collection, entered in table DIGCOL.

Related functional groups

The integrated services digital network (ISDN) working group associates with OM group BCAPCG.

Registers

The following table lists the registers associated with OM group BCAPCG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group BCAPCG

Register name	Measures
CGWRNGBC	Customer group with wrong bearer capability

CGWRNGBC

Register type
Peg

Description
CGWRNGBC counts calls that do not complete because the BC of the call originator and the BC of the called party are not compatible. The call originator belongs to a particular customer group.

CGWRNGBC does not increase if the originator is a POTS station.

Associated registers
None

Extension registers
None

Associated logs
None

BCAPOF

Description

OM group Bearer Capability Per Office (BCAPOF) collects operational measurements that relate to bearer capabilities (BC) for each office. These registers count calls that do not reach the intended call appearance(s) because of BC incompatibility. These registers count also counts calls that use a synonym directory number to reach the intended terminator(s).

The originator receives CALL_NOT_ACCEPTED (CNAC) treatment.

The following table lists the key and info fields associated with OM group BCAPOF.

Key field	Info field
None	None

Related functional groups

The Integrated services digital network (ISDN) working group is associated with OM group BCAPOF.

Registers

The following table lists the registers associated with OM group BCAPOF and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group BCAPOF

Register name	Measures
OFSYNDN	Originating party uses a synonym directory number
OFWRNGBC	Originating party with wrong bearer capability

OFSYNDN

Register type
Peg

Description
OFSYNDN counts calls that use a synonym directory number.

Associated registers
None

Extension registers
None

Associated logs
None

OFWRNGBC

Register type
Peg

Description
OFWRNGBC counts calls that are not completed because the BC of the call originator and the call terminator are not compatible.

Associated registers
None

Extension registers
None

Associated logs
None

BCLID

Description

OM group Bulk Calling Line Identification (BCLID) provides information about BCLID calls on an office-wide basis.

BCLID contains registers that count:

- BCLID messages with a complete calling directory number that the system sends to customer premises equipment (CPE)
- BCLID messages with an out-of-area indication that the system sends to customer premises equipment (CPE)
- BCLID messages with a private directory number indication that the system sends to customer premises equipment (CPE)

The following table lists the key and info fields associated with OM group BCLID.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group BCLID:

- Line Trunk Controller (LTC)
- Line Group Controller (LGC)
- Remote Cluster Controller (RCC)

Registers

The following table lists the registers associated with OM group BCLID and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group BCLID

Register name	Measures
BCLDCLDN	Calling directory number delivered
BCLDOOA	Out-of-area indication delivered
BCLDPRIV	Private directory number indication delivered

BCLDCLDN

Register type
Peg

Description
BCLDCLDN counts BCLID messages with a complete directory number (DN) that the system sends to the customer premises equipment (CPE).

The system sends BCLID messages with a complete directory number:

- for calls to lines or trunks from a line not entered to have a private DN
- for calls to lines or trunks from a line outside the BCLID group of the terminating line or trunk

Associated registers
None

Extension registers
BCLDCLD2

Associated logs
None

BCLDOOA

Register type
Peg

Description
BCLDOOA counts BCLID messages with an out-of-area indication that the system sends to the customer premises equipment (CDE).

The system sends BCLID messages with out-of-area indication for the following calls:

- calls from an incoming trunk that does not provide call setup information
- calls involving a TOPS position
- calls from an attendant console to a BCLID subscriber

Associated registers
None

Extension registers
BCLDOOA2

Associated logs
None

BCLDPRIV

Register type
Peg

Description
BCLDPRIV counts BCLID messages with a private directory number (DN) indication. BCLDPRIV counts BCLID messages with a private DN indication that are sent to the customer premises equipment.

BCLID messages with a private DN indication are sent:

- if the presentation indicator in the Initial Address Message (IAM) of an ISUP trunk to BCLID line call indicates that the DN cannot appear.
- if the SUPPRESS option is entered in table DNATTRS against the calling line
- if the calling number delivery blocking (CNDB) feature activates on the calling line

Associated registers
None

Extension registers
BCLDPR12

Associated logs
None

BCLIDNL

Description

OM group Bulk Calling Line Identification No Links (BCLIDNL) records the number of BCLID messages not sent to the customer premises equipment (CPE) due to a lack of in-service BCLID data links for each BCLID group. BCLID records the number of BCLID messages for each BCLID group.

The following table lists the key and info fields associated with OM group BCLIDNL.

Key field	Info field
BCLIDGRP_INDEX_RANGE	None

Table BCLIDGRP contains an entry of each group that has an associated count.

Related functional groups

The Bulk Calling Line Identification (BCLID) functional group is associated with OM group BCLIDNL.

Registers

The following table lists the registers associated with OM group BCLIDNL and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group BCLIDNL

Register name	Measures
BCLDNOLK	BCLID no links

BCLDNOLK

Register type
Peg

Description
BCLDNOLK increases each time a BCLID message cannot be sent to the CPE because in-service BCLID data links are not present. The register that associates with the specified BCLID group increases.

Associated registers
None

Extension registers
None

Associated logs
None

BCLIDO

Description

OM group Bulk Calling Line Identification Data Link Overload (BCLIDO) provides information about bulk calling line identification (BCLID) calls on a BCLID group basis.

BCLID contains one register that counts BCLID messages that cannot be sent to the customer premises equipment (CPE) because of overloaded data links.

The following table lists the key and info fields associated with OM group BCLIDO.

Key field	Info field
An integer in the range 0 to 4095 represents the BCLID group number	None

Related functional groups

The following functional groups are associated with OM group BCLIDO:

- Line Trunk Controller (LTC)
- Line Group Controller (LGC)
- Remote Cluster Controller (RCC)

Registers

The following table lists the registers associated with OM group BCLIDO and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group BCLIDO

Register name	Measures
BCLDOVLD	Data link overload

BCLDOVLD

Register type
Peg

Description
BCLDOVLD counts BCLID messages that cannot be sent to the customer premises equipment (CPE) because of overloaded data links.

Associated registers
None

Extension registers
None

Associated logs
None

BCTPOOL

Description

OM group Bearer Channel Tamdeming Resource Pool (BCTPOOL) counts:

- errors and faults in the IOCs
- device errors that the system detects on P-side links

The usage registers for BCTPOOL record:

- system busy links
- manual busy links

The data that the IOC supplies is used to monitor the performance of the IOCs and the output devices that the IOCs support.

The following table lists the key and info fields associated with OM group BCTPOOL.

Key field	Info field
XPM_NO, the XPM_NO (0 - 255) of the BCT resource pool, used with the BCT PM_TYPE as a key into table SERVSINV.	None

Related functional groups

There are no functional groups associated with OM group BCTPOOL.

Registers

The following table lists the registers associated with OM group BCTPOOL only and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group BCTPOOL

Register name	Measures
BCTRSRVA	BCT pool reservation attempts
BCTRSRVS	BCT pool reservation successes
BCTRQSTA	BCT resource pool resource request attempts
BCTRQSTS	BCT resource pool resource request successes

BCTRSRVA

Register type
Peg

Description
BCTRSRVA counts the number of attempts made to reserve resources from a BCT resource pool.

Associated registers
BCTRSRVS

Extension registers
None

Associated logs
None

BCTRSRVS

Register type
Peg

Description
BCTRSRVS counts the number of times that resources were successfully reserved from a BCT resource pool.

Associated registers
BCTRSRVA

Extension registers
None

Associated logs
None

BCTRQSTA

Register type
Peg

Description
BCTRQSTA counts the number of attempts made to request a resource from a BCT resource pool.

Associated registers
BCTRQSTS

Extension registers
None

Associated logs
None

BCTRQSTS

Register type
Peg

Description
BCTRQSTS counts the number of times a resource was successfully requested from a resource pool.

Associated registers
BCTRQSTA

Extension registers
None

Associated logs
NOne

BCTTANDM

Description

OM group Bearer Channel Tandeming Tandemed Calls (BCTTANDM) tracks the activity of BCT tandem calls.

The following table lists the key and info fields associated with OM group BCTTANDM.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group BCCTANDM.

Registers

The following table lists the registers associated with OM group BCTTANDM only and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group BCTTANDM

Register name	Measures
BCTTNDMA	BCT tandeming attempts
BCTTNDMS	BCT tandeming successes

BCTTNDMA

Register type
Peg

Description
BCTTNDMA counts the number of calls that are attempted to be tandemed.

Associated registers
BCTTNDMS

Extension registers
None

Associated logs
None

BCTTNDMS

Register type
Peg

Description
BCTTNDMS counts the number of calls that are successfully tandemed.

Associated registers
BCTTNDMA

Extension registers
None

Associated logs
None

BladeConn

Description

These are OMs that have to deal with the connections on individual blades on the Border Control Point.

The following table lists the key and info fields associated with OM group BladeConn.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group BladeConn:

- Border Control Point

Registers

The following table lists the registers associated with OM group BladeConn and what they measure. For a description of a register, click on the register name.

Registers for OM group BladeConn

Register name	Measures
connsPreExisting	connections preexisting
connsRestored	connections restored

connsPreExisting

Register type
Peg

Description
Meter showing the number of connections discovered during last blade recovery action.

Associated registers
connsRestored

Extension registers
None

Associated logs
None

connsRestored

Register type
Peg

Description
Meter showing the number of connections reconstructed during last blade recovery action.

Associated registers
connsPreExisting

Extension registers
None

Associated logs
None

BLUEBOX

Description

OM group Bluebox Fraud Detection Group (BLUEBOX) counts activities that indicate the use of a blue box. A blue box device places long distance calls through a route with low or no cost.

BLUEBOX tests for, records, and disposes of false calls in a DMS-200 office. This feature detects false multifrequency (MF) signaling over centralized automatic message accounting (CAMA) and SuperCAMA trunks. This feature does not detect false MF signaling over traffic operator position system (TOPS) trunks.

The system activates a blue box test when an office detects a wink that is not expected on an incoming trunk. The system connects the call to a reserved multifrequency receiver to test the call. If the call is fraudulent, the system generates an AMA record. The call can continue or is cut. The call is cut if the MAP terminal specifies the CUT option when the blue box fraud detection feature activates.

Three registers in BLUEBOX count:

- winks that indicate false calls
- correct attachments of mF receivers for suspect calls
- false calls

The following table lists the key and info fields associated with OM group BLUEBOX.

Key field	Info field
None	None

The BLUEBOX increases when the bluebox fraud detection feature activates from the MAP terminal.

Related functional groups

The following functional groups are related to OM group BLUEBOX:

- DMS 200
- CAMA
- CLASS

Registers

The following table lists the registers associated with OM group BLUEBOX and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group BLUEBOX

Register name	Measures
BBATTACH	Bluebox attachment
BBDETECT	Bluebox detect
BBWINKS	Bluebox winks

BBATTACH

Register type
Peg

Description
BBATTACH counts calls that attach to a multifrequency receiver reserved for bluebox fraud detection. The system attaches calls to the receiver when a wink that is not expected occurs on an incoming trunk.

The values in BBATTACH and BBWINKS can differ for any of the following reasons:

- there are no multifrequency (MF) receivers available for a suspect call
- the system attaches the suspect call to a receiver before a wink that is not expected occurs
- the network path cannot establish

Associated registers
BBWINKS

Extension registers
None

Associated logs
None

BBDETECT

Register type
Peg

Description
BBDETECT counts the false calls that the blue box fraud detection feature detects.

Associated registers
None

Associated logs
TRK153

BBWINKS

Register type
Peg

Description
BBWINKS counts winks that are not expected. Register BBWINKS counts winks that indicate possible bluebox activity on incoming trunks. A wink that is not expected activates a blue box fraud detection test. The system attaches a reserved multifrequency (MF) receiver for the suspect call.

Associated registers
BBATTACH

Extension registers
None

Associated logs
NOne

BRSTAT

Description

OM group BRSTAT measures CPU usage (occupancy) for Bell-Northern Research reduced instruction set computer (BRISC) offices and CS 2000 - Compact offices.

The following table lists the key and info fields associated with OM group BRSTAT.

Key field	Info field
None	None

BRSTAT registers provide the following information:

- average call process capacity since the last OM transfer
- call problem ratio observed over the last OM transfer period
- ratio of operating system overhead on the switch to a specification for operating system overhead at capacity
- the number of times the switch was idle, that is, the IDLE scheduler class runs during the OM transfer period

The Support Operating System (SOS) scheduler uses scheduler classes to allocate CPU time to simultaneous processes. A scheduler class is a group of processes that perform like or related functions.

The OM group BRSTAT can measure call processing capacity and can assist with engineering an office.

All BRSTAT holding register values are percent utilizations. These percent utilizations are for the last OM transfer period, except for registers BRSIDLE and BRSCMPLX. Register BRSIDLE increases for each one-minute scan in which the IDLE scheduler class runs during the transfer period. Register BRSCMPLX indicates the call mix complexity for the last transfer period. BRSCMPLX is not accurate for CS 2000 - Compact offices.

The BRSTAT accumulating registers accumulate the values from the holding registers during the collection period. For example, you assume:

- the OM transfer period is set to 30 min
- the OM group BRSTAT has accumulated for 60 min
- the accumulating register BRSCAP reads 100

To determine the number of transfer periods during the accumulation period, divide 60 min by the 30 min transfer period (60/30 = 2).

To determine the average usage during the accumulation period, divide the value of register BRSCAP by the number of transfer periods.

100%/2 = 50%

Use the same method to calculate the average percent usages from the following registers:

- BRSSCHED
- BRSFORE
- BRSMAINT
- BRSDNC
- BRSOM
- BRSGETERM
- BRSBKG
- BRSAUXCP
- BRSNETM

To calculate the average complexity for the accumulation period, divide register BRSCMPLX by the number of OM transfers during the period.

Related functional groups

There are no functional groups associated with OM group BRSTAT.

Registers

The following table lists the registers associated with OM group BRSTAT and what each register measures.

Registers for OM group BRSTAT

Register name	Measures
BRSAUXCP	BRISC auxiliary call processing class
BRSBKG	BRISC background class
BRSCAP	BRISC call capacity
BRSCMPLX	BRISC call complexity ratio
BRSDNC	BRISC network operating system file transfer class
BRSFORE	BRISC foreground usage
BRSGTERM	BRISC guaranteed terminal class
BRSIDLE	BRISC idle periods
BRSMAINT	BRISC maintenance class
BRSNETM	BRISC network maintenance
BRSOM	BRISC operational measurement
BRSSCHED	BRISC scheduler overhead
BRSSNIP	BRISC CPU status of SuperNode internet protocol (SNIP) class

BRSAUXCP

Register type
Usage

Scan rate
60 seconds

Description
Register BRSAUXCP records a value that compares the percentage of AUXCP scheduler class utilization on the switch to the value of office parameter AUXCP_CPU_SHARE in table OFCENG. The updated

BRSAUXCP reflects the average usage of the AUXCP scheduler class from the last OM transfer period.

A value of 100 indicates that the percentage use of the AUXCP scheduler class matches the value in parameter AUXCP_CPU_SHARE. This value can exceed 100.

Associated registers
None

Associated logs
None

BRSBKG

Register type
Usage

Scan rate
60 seconds

Description
Register BRSBKG records a value that compares the percentage of background scheduler class utilization on the switch to its given usage allocation. The updated BRSBKG reflects the average use of the background scheduler class from the last OM transfer period.

The system allocates 3% of the CPU to the background scheduler class. A value of 100 indicates that the background scheduler class uses 3% of the CPU. This value can exceed 100.

Associated registers
None

Associated logs
None

BRSCAP

Register type
Usage

Scan rate
60 seconds

Description
BRSCAP reflects the average call processing capacity observed since the last OM transfer.

Register BRSCAP indicates the percentage of call processing capacity. This percentage is used within the engineering recommendation for which grade-of-service specifications are guaranteed.

Associated registers
BRSCMPLX

Associated logs
None

BRSCMPLX

Register type
Usage

Scan rate
60 seconds

Description
BRSCMPLX reflects the observed complexity ratio of the current call mix on the switch for the last minute. The values in this register represent the call complexity from the last OM period. Refer to the group description for more details on how to calculate ratios over an OM period. This register is inaccurate for CS 2000 - Compact.

The complexity ratio compares the complexity of the current call mix on the switch to the standard office. A plain ordinary telephone service (POTS) model represents the standard office. The Series 50 BRISC processor carries 1.2 million calls per hour, which field ENGCATMP (engineerable call attempts per hour) lists. The Series 50 BRISC processor carries 1.2 million calls per hour when the processor uses the CPSTAT tool at the MAP. An SN07 release CS 2000 - Compact carries 1.4 million calls per hour in the North American market. International market and hybrid switches have lower capacity.

A value of 100 indicates that the complexity of the call mix over the last OM period matches the complexity of a standard office. If this register reports a value of less than 100, the switch is running a less complex call mix. A value of more than 100 indicates that the switch will achieve a lower maximum call rate. A more complex call mix causes this lower maximum call rate.

Associated registers
None

Associated logs
None

BRSDNC

Register type
Usage

Scan rate
60 seconds

Description
Register BRSDNC records a value. This value compares the percentage of Network Operating System file transfer (NOSFT) scheduler class utilization on the switch to its usage allocation. The updated BRSDNC reflects the average use of the NOSFT scheduler class from the last OM transfer period.

The system allocates 3% of the CPU to the NOSFT scheduler class. A value of 100 indicates that the NOSFT scheduler class uses 3% of the CPU. This value can exceed 100.

Associated registers
None

Associated logs
None

BRSFORE

Register type
Usage

Scan rate
60 seconds

Description
Register BRSFORE records a value. This value compares the percentage of operating system overhead on the switch to a given specification for operating system overhead at capacity. The updated BRSFORE reflects the average operating system overhead from the last OM transfer period.

The expected operating system overhead at capacity on a switch is 1% of the CPU. A value of 100 indicates that the operating system overhead uses 1% of the CPU. This value can exceed 100.

Associated registers
None

Associated logs
None

BRSGTERM

Register type
Usage

Scan rate
60 seconds

Description
Register BRSGTERM records a value. This value compares the percentage of guaranteed terminal (GTERM) scheduler class utilization on the switch to the value of office parameter GUARANTEED_TERMINAL_CPU_SHARE in table OFCENG. The updated BRSGTERM reflects the average use of the GTERM scheduler class from the last OM transfer period.

A value of 100 indicates that the percentage use of the GTERM scheduler class matches the value in parameter GUARANTEED_TERMINAL_CPU_SHARE. This value can exceed 100.

Associated registers
None

Associated logs
None

BRSIDLE

Register type
Peg

Description
Register BRSIDLE increases when the switch is idle and the IDLE scheduler class runs during the OM transfer period.

The system updates register BRSIDLE every minute. If an IDLE scheduler class runs during the last minute BRSIDLE increases by one. This update indicates idle time during the last minute. This update does not compute the amount of capacity this idle time represents.

The values for this register range from zero to the number of minutes set for the OM transfer period. If the OM transfer period is set to 30 min, the range is 0 to 30 for use of the IDLE scheduler class.

Associated registers
None

Associated logs
None

BRSMAINT

Register type
Usage

Scan rate
60 seconds

Description
BRSMAINT compares the percentage of maintenance scheduler class utilization on the switch to its given allocation for usage. The updated BRSMAINT reflects the average use of the maintenance scheduler class from the last OM transfer period.

The maintenance scheduler class is allocated 8% of the CPU. A value of 100 indicates that the maintenance scheduler class uses 8% of the CPU. This value can exceed 100.

Associated registers
None

Associated logs
None

BRSNETM

Register type
Usage

Scan rate
60 seconds

Description
BRSNETM compares the percentage of network maintenance (NETM) scheduler class utilization on the switch to its usage allocation. The updated BRSNETM reflects the average use of the NETM scheduler class from the last OM transfer period.

The NETM scheduler class is allocated either 0% or 20% of the CPU. A value of 100 indicates that the NETM scheduler class usage is the same as that currently allocated for this class (0% or 20%). This value can exceed 100.

Associated registers
None

Associated logs
None

BRSOM

Register type
Usage

Scan rate
60 seconds

Description
BRSOM compares the percentage of OM scheduler class utilization on the switch to its usage allocation. The updated BRSOM reflects the average use of the OM scheduler class from the last OM transfer period.

The OM scheduler class is allocated 3% of the CPU. A value of 100 indicates that the OM scheduler class uses 3% of the CPU. This value can exceed 100.

Associated registers
None

Associated logs
None

BRSSCHED

Register type
Usage

Scan rate
60 seconds

Description
BRSSCHED compares the percentage of scheduling overhead on the switch to a given specification for scheduling overhead at capacity. The system updates register BRSSCHED every minute. The updated BRSSCHED reflects the average scheduling overhead from the last OM transfer period.

The expected scheduling overhead at capacity on a switch is 4% of the CPU. A value of 100 indicates that the scheduling overhead uses 4% of the CPU. This value can exceed 100.

Associated registers
None

Associated logs
None

BRSSNIP

Register type
Usage

Scan rate
60 seconds

Description
BRSSNIP compares the percentage of SNIP scheduler class utilization on the switch to its usage allocation. The updated BRSSNIP reflects the average use of the SNIP scheduler class from the last OM transfer period.

The system allocates 0% or 3% of the CPU to the SNIP scheduler class. A value of 100 indicates that the SNIP scheduler class usage is the same as that currently allocated for this class (0% or 3%). This value can exceed 100.

Associated registers
None

Associated logs
None

C7GTLNK

Description

OM group SCCP Global Title OMs Per Link (C7GTLNK) captures operational information about global title translations (GTT) OMs uploaded from the link. When GTT OMs are uploaded, C7GTLNK places each OM in its own register corresponding to the correct link.

C7GTLNK contains registers that monitor the number of:

- GTTs performed
- failed GTTs that encountered errors in the called party address (CDPA)
- hop counter problems
- message signal units (MSU) sampled that experience handling delays more than 95% of the time with and without GTT

The following table lists the key and info fields associated with OM group C7GTLNK.

Key field	Info field
C7_LINKSET_NUMBER {0 TO max_c7_linksets +1}	C7LINK_OMINFO {0 to 15}

Related functional groups

There are no functional groups associated with OM group C7GTLNK.

Registers

The following table lists the registers associated with OM group C7GTLNK and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7GTLNK (Sheet 1 of 2)

Register name	Measures
C7GTT	Number of translations performed
C7RFNTN	Routing failures for no translation of address nature
C7RFNTA	Routing failures for no translation of address

Registers for OM group C7GTLNK (Sheet 2 of 2)

Register name	Measures
C7HOPERR	Hop counter violations
C795GTT	MSUs with GTT that have delays greater than 95%
C795NGTT	MSUs without GTT that have delays greater than 95%

C7GTT

Register type
Peg

Description
C7GTT counts the number of GTTs performed per link.

Associated registers
None

Extension registers
C7GTT2

Associated logs
None

C7RFNTN

Register type
Peg

Description
C7RFNTN counts the number of GTTs per link that resulted in error and could not be routed. The routing failed because an invalid field value in the CDPA exists.

Associated registers
None

Extension registers
None

Associated logs
CCS241

C7RFNTA

Register type
Peg

Description
C7RFNTA counts the number of GTTs per link that resulted in error and could not be routed. The routing failed because an invalid field value in the called party address (CDPA) exists.

Associated registers
None

Extension registers
None

Associated logs
CCS241

C7HOPERR

Register type
Peg

Description
C7HOPERR counts the number of messages per link that have an signaling connection control part (SCCP) hop counter violation.

Associated registers
None

Extension registers
None

Associated logs
CCS241

C795GTT

Register type
Peg

Description
C795GTT counts the number of message signal unit (MSU) tests per link that require global title translation (GTT) and experience handling delays more than 95% of the time.

Associated registers
None

Extension registers
None

Associated logs
None

C795NGTT

Register type
Peg

Description
C795NGTT counts the number of MSU tests per link that do not require global title translation (GTT) and experience handling delays more than 95% of the time.

Associated registers
None

Extension registers
None

Associated logs
None

C7GTWSCR

Description

C7 gateway screening (C7GTWSCR)

The C7GTWSCR counts messages discarded at a DMS STP by C7 gateway screening because the messages are written by users that are not authorized. A gateway signaling transfer point (STP) allows one Common Channeling Signaling 7 (CCS7) network access to another network's resources, such as authorized databases. CCS7 gateway screens incoming messages to a CCS7 network. The CCS7 screens based on the message transfer part (MTP) or the signal connection control part (SCCP) portions of a message, or both.

Registers in the OM group C7GTWSCR count the total number of screening failures. Registers in this group make separate counts of discards for each screening function. The registers increase the following causes:

- screening error in a message unit
- disallowed address
- disallowed originating point codes
- disallowed destination point codes
- incorrect service indicator, message priority, calling party address, affected point code, and incorrect subsystem status tests
- incorrect destination field
- incorrect translation type
- disallowed PC/SSN in a called party address
- incorrect called-party address (CDPA) routing indication, SSN, SCCP message type, and incorrect linkset group.

The system temporarily stores Operational measurement (OM) data in CCS7 link interface units (LIU7), high-speed link interface units (HLIU) and high-speed link routers (HSLR). The system sends the OM data to the computing module (CM) one minute before the active-to-holdingOMtransfer, or when the buffers are full.

The OM group C7GTWSCR provides one tuple for each gateway linkset for each originating network, to a maximum of 1000.

Key field	Info field
C7_LINKSET_NUMBER	C7GTWSCR_OMINFO

The system reports tuples in the order that the linkset//operator number identification (ONI) pairs are allocated.

Related functional groups

The following functional groups associate with OM group C7GTWSCR:

- CCS7
- STP

Registers

The following table lists the registers associated with OM group C7GTWSCR and what they measure. For a description of a register, click on the register name.

Registers for OM group C7GTWSCR

Register name	Measures
MSUDSCRD	Message signal units discarded (MSUDSCRD)
MSURJAPC	Message signal units rejected, caused by incorrect PC/SSN.
MSURJCPA	Message signal units rejected because of an invalid calling party address (CGPA).
MSURJDPC	Message signal units rejected, caused by a disallowed destination point code (MSURJDPC)
MSURJDSN	SCCP MSUs rejected, caused by a disallowed point code and subsystem in the called party address (MSURJDSN)
MSURJDST	MTP NWM messages rejected, caused by an incorrect destination field.
MSURJH01	Message signal units discarded, caused by incorrect H0 and H1 codes

Registers for OM group C7GTWSCR

Register name	Measures
MSURJNIC	Message signal units discarded, caused by incorrect network indicator field
MSURJOPC	Message signal units rejected, caused by a disallowed origination point code.
MSURJPCS	Subsystem status test messages rejected, caused by an incorrect affected point code and subsystem (MSURJPCS)
MSURJPRI	Message signal units rejected, caused by an incorrect message priority
MSURJSI	Message signal units rejected, caused by an invalid service indicator (MSURJSI)
MSURJTM	Testing and maintenance message signal units rejected
MSURJTT	SCCP MSUs caused by an incorrect translation type (MSURJTT)
MSUSCRER	Message signal unit screening errors (MSUSCRER)

MSUDSCRD

Register type
Peg

Description
Message signal units discarded (MSUDSCRD) Register

MSUDSCRD counts message signal units (MSU) that the system discards because of gateway screening failures.

Associated registers
Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid calling party address (CGPA), subsystem number (SSN), CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts subsystem status test (SST) messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTP network management (NWM) messages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
MSUDSCR2

Associated logs
The system generates log CCS500 when the MSUs that gateway screening functions discard exceed the threshold value for MSUs. The threshold value for MSUs is entered in table C7GTWLKS.

The system generates log CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJAPC

Register type
Peg

Description
Message signal units rejected, caused by incorrect PC/SSN.

Register MSURJAPC counts MSUs that the system discards because of an affected PC/SSN that are not correct.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJCPA

Register type
Peg

Description
Message signal units rejected because of an invalid calling party address (CGPA).

Register MSURJCPA counts MSUs discarded because of an invalid CGPA or an invalid linkset group.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJDPC

Register type
Peg

Description
Message signal units rejected, caused by a disallowed destination point code (MSURJDPC)

MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTP NWM messages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log includes the date, time, and reason for discard.

MSURJDSN

Register type
Peg

Description
SCCP MSUs rejected, caused by a disallowed point code and subsystem in the called party address (MSURJDSN)

Register MSURJDSN counts SCCP MSUs that the system discards because of a point code and subsystem (PC/SSN) in the called party address that are not allowed.

Associated registers
Register MSUDSCRD counts MSUs that are discarded due to gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates log CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJDST

Register type
Peg

Description
MTP NWM messages rejected, caused by an incorrect destination field.

Register MSURJDST counts MTP NWM messages that the system discards because of a destination field that is not correct.

Associated registers

Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJH01

Register type
Peg

Description
Message signal units discarded, caused by incorrect H0 and H1 codes

Register MSURJH01 counts MSUs that the system discards because of an H0 and H1 codes that is not correct.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJNIC

Register type
Peg

Description
Message signal units discarded, caused by incorrect network indicator field

Register MSURJNIC counts MSUs that the system discards because of a network indicator field in the service information octet that is not correct.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJDST counts MTP network management messages that are discarded because of an invalid destination field.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJOPC

Register type
Peg

Description
Message signal units rejected, caused by a disallowed origination point code.

Register MSURJOPC counts MSUs that the system discards because of an origination point code that is not allowed.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJPCS

Register type
Peg

Description
Subsystem status test messages rejected, caused by an incorrect affected point code and subsystem (MSURJPCS)

Register MSURJPCS counts subsystem status test (SST) messages that the system discards because of an affected point code and subsystem (PC/SSN) that are not correct.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJPRI

Register type
Peg

Description
Message signal units rejected, caused by an incorrect message priority

Register MSURJPRI counts MSUs that the system discards because of a message priority that is not correct.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJSI

Register type
Peg

Description
Message signal units rejected, caused by an invalid service indicator (MSURJSI)

Register MSURJSI counts MSUs that the system discards because of a service indicator that is not correct.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJTM

Register type
Peg

Description
Testing and maintenance message signal units rejected

Register MSURJTM counts testing and maintenance MSUs that the system discards because of an address that is not allowed.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJTT counts SCCP MSUs that are discarded because of an invalid translation type.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS50S each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSURJTT

Register type
Peg

Description
SCCP MSUs caused by an incorrect translation type (MSURJTT)

Register MSURJTT counts SCCP MSUs that the system discards because of a translation type that is not correct.

Associated registers
Register MSUDSCRD counts MSUs that are discarded because of gateway screening failures.

Register MSUSCRER counts MSUs that cause an error in a screening function.

Register MSURJTM counts testing and maintenance MSUs that are discarded because of a disallowed address.

Register MSURJOPC counts MSUs that are discarded because of a disallowed origination point code.

Register MSURJDPC counts MSUs that are discarded because of a disallowed destination point code.

Register MSURJSI counts MSUs that are discarded because of an invalid service indicator.

Register MSURJPRI counts MSUs that are discarded because of an invalid message priority.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that are discarded because of an invalid affected PC/SSN.

Register MSURJPCS counts SST messages that are discarded because of an invalid affected PC/SSN.

Register MSURJDST counts MTPNWMmessages that are discarded because of an invalid destination field.

Register MSURJDSN counts SCCP MSUs that are discarded because of a disallowed PC/SSN in the called party address.

Register MSURJH01 counts MSUs that are discarded because of an invalid H0 or H1 codes.

Register MSURJNIC counts MSUs that are discarded because of an invalid network indicator field in the service information octet.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs
The system generates CCS502 each time a gateway screening function discards a message. The log report includes the date, time, and reason for discard.

MSUSCRER

Register type
Peg

Description
Message signal unit screening errors (MSUSCRER) Register MSUSCRER MSUs that cause an error in a screening function.

Associated registers
Register MSUDSCRD counts MSUs that the system discards because of gateway screening failures.

Register MSURJTM counts testing and maintenance MSUs that the system rejects because of an address that is not allowed.

Register MSURJOPC counts MSUs that the system discards because of an origination point code that is not allowed.

Register MSURJDPC counts MSUs that the system discards because of a destination point code that is not allowed.

Register MSURJSI counts MSUs that the system discards because of a service indicator that is not correct.

Register MSURJPRI counts MSUs that the system discards because of a message priority that is not correct.

Register MSURJCPA counts MSUs that are discarded because of an invalid CGPA, SSN, CDPA routing indicator or linkset group.

Register MSURJAPC counts MSUs that the system discards because of an affected point code and subsystem (PC/SSN) that are not correct.

Register MSURJPCS counts SSTs messages that the system discards because of an affected point code and subsystem (PC/SSN) that are not correct.

Register MSURJDST counts MTPs network management (NWM) messages that the system discards because of a destination field that is not correct.

Register MSURJTT counts SCCPs message signal units that the system discards because of a translation type that is not correct.

Register MSURJDSN counts SCCPs message signal units that the system discards because of a translation type that is not correct.

Register MSURJH01 counts MSUs that the system discards because of an H0 and H1 code that is not correct.

Register MSURJNIC counts MSUs that the system discards because of a network indicator field in the service information octet that is not correct.

MSUDSCRD + MSUDSCR2 x 65536 = MSUSCRER + MSURJTM + MSURJOPC + MSURJDPC + MSURJSI + MSURJPRI + MSURJCPA + MSURJAPC + MSURJPCS + MSURJDST + MSURJTT + MSURJDSN + MSURJH01 + MSURJNIC

Extension registers
There are no extension registers.

Associated logs

The system generates CCS503 generates each time a gateway screening function fails because of an error. The log report includes the date, time, and the screening function in which the error occurs.

C7GWSCCP

Description

OM group CCS7 Gateway Signaling Connection Control Part (C7GWSCCP) monitors the performance and use of the CCS7 international gateway signaling connection control part (SCCP).

The following table lists the key and info fields associated with OM group C7GWSCCP.

Key field	Info field
None	None

Related functional groups

The following function groups are associated with OM group C7GWSCCP:

- DMS-300
- Message switch and buffer for CCS7 (MSB7)

Registers

The following table lists the registers associated with OM group C7GWSCCP only and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7GWSCCP

Register name	Measures
C7THROWN	Messages discarded
C7MSGCC	Message processed by central control

C7THROWN

Register type
Peg

Description
C7THROWN counts incoming SCCP messages the system discards because of an overload in the message switch and buffer for CCS7 (MSB7).

Associated registers
The following registers are associated with C7THROWN:

- C7SCCP_C7MSGHDL, which counts SCCP messages that the international gateway SCCP switch handle
- C7MSGCC

Validation formula
C7SCCP_C7MSGHDL = C7THROWN + C7MSGCC

Extension registers
None

Associated logs
None

C7MSGCC

Register type
Peg

Description
C7MSGCC counts SCCP messages that the central control process.

Associated registers
The following registers are associated with C7MSGCC:

- C7SCCP_C7MSGHDL, which counts SCCP messages that the international gateway SCCP switch handle.
- C7THROWN

Validation formula
C7SCCP_C7MSGHDL = C7THROWN + C7MSGCC

Extension registers
C7MSGCC2

Associated logs
None

C7HSLAL1

Description

CCS7 High-speed Link Signaling ATM Adaptation Layer Events Group 1 C7HSLAL1 provides information related to the operation of the CCS7 high-speed link asynchronous transfer mode (ATM) adaptation layer.

OM group C7HSLAL1 provides a tuple for each key. Key field:

- C7_LINKSET_NUMBER. Number in the range 0 to 254 is used as an index into table C7LKSET.
- Info field: C7LINK_OMINFO. The Info field has a two-part key:
  - CLLI and C7_SIGLINK_CODE:
    CLLI is the common language location identifier of the linkset that owns the link.
  - C7_SIGLINK_CODE:
    is a number from 0 to 15 that identifies the link in the linkset.

Key field	Info field
C7_LINKSET_NUMBER	C7LINK_OMINFO

Related functional groups

The following functional groups are associated with OM group C7HSLAL1:

- Common Channel Signaling 7 (CCS7)

Registers

The following table lists the registers associated with OM group C7HSLAL1 and what they measure. For a description of a register, click on the register name.

Registers for OM group C7HSLAL1

Register name	Measures
C7SSPT1	SSCOP SD PDUs Transmitted
C7SSPRT1	SSCOP SD PDUs Retransmitted
C7SSPOT1	SSCOP SD PDU Octets Transmitted
C7SPORT1	SSCOP SD PDU Octets Retransmitted

Registers for OM group C7HSLAL1

Register name	Measures
C7SPR1	SSCOP SD PDUs Received
C7SPOR1	SSCOP SD PDU Octets Received
C7STPT1	Total SSCOP PDUs Transmitted
C7STPR1	Total SSCOP PDUs Received
C7STPOT1	Total SSCOP PDU Octets Transmitted
C7STPOR1	Total SSCOP PDU Octets Received

C7SSPT1

Register type
Peg

Description
SSCOP SD PDUs Transmitted

Register C7SSPT1 counts the number of transmitted Service Specific Connection Oriented Protocol (SSCOP) sequence data (SD) packet data units (PDU).

Associated registers
There are no associated registers.

Extension registers
C7SSPT2

Associated logs
There are no associated logs.

C7SSPRT1

Register type
Peg

Description
SSCOP SD PDUs Retransmitted

Register C7SSPRT1 counts the number of retransmitted SSCOP SD PDUs.

Associated registers
There are no associated registers.

Extension registers
C7SSPRT2

Associated logs
There are no associated logs.

C7SSPOT1

Register type
Peg

Description
SSCOP SD PDU Octets Transmitted

Register C7SSPOT1 counts the number of transmitted SSCOP SD PDU octets.

Associated registers
There are no associated registers.

Extension registers
C7SSPOT2

Associated logs
There are no associated logs.

C7SPORT1

Register type
Peg

Description
SSCOP SD PDU Octets Retransmitted Register C7SPORT1 counts the number of retransmitted SSCOP SD PDU octets.

Associated registers
There are no associated registers.

Extension registers
C7SPORT2

Associated logs
There are no associated logs.

C7SPR1

Register type
Peg

Description
SSCOP SD PDUs Received

Register C7SPR1 counts the number of received SSCOP SD PDUs.

Associated registers
There are no associated registers.

Extension registers
C7SPR2

Associated logs
There are no associated logs.

C7SPOR1

Register type
Peg

Description
SSCOP SD PDU Octets Received Register C7SPOR1 counts the number of received SSCOP SD PDU octets.

Associated registers
There are no associated registers.

Extension registers
C7SPOR2

Associated logs
There are no associated logs.

C7STPT1

Register type
Peg

Description
Total SSCOP PDUs Transmitted

Register C7STPT1 counts the total number of transmitted SSCOP PDUs.

Associated registers
There are no associated registers.

Extension registers
C7STPT2

Associated logs
There are no associated logs.

C7STPR1

Register type
Peg

Description
Total SSCOP PDUs Received

C7STPR1 counts the total number of received SSCOP PDUs.

Associated registers
There are no associated registers.

Extension registers
C7STPR2

Associated logs
There are no associated logs.

C7STPOT1

Register type
Peg

Description
Total SSCOP PDU Octets Transmitted Register

C7STPOT1 counts the total number of transmitted SSCOP PDU octets.

Associated registers
There are no associated registers.

Extension registers
C7STPOT2

Associated logs
There are no associated logs.

C7STPOR1

Register type
Peg

Description
Total SSCOP PDU Octets Received Register C7STPOR1 counts the total number of received SSCOP PDU octets.

Associated registers
There are no associated registers.

Extension registers
C7STPOR2

Associated logs
There are no associated logs.

C7HSLAL2

Description

OM group CCS7 High-speed Link Signaling ATM Adaptation Layer Events Group 2 (C7HSLAL2) provides information on CCS7 high-speed link asynchronous transfer mode (ATM) adaptation layer operations.

The following table lists the key and info fields associated with OM group C7HSLAL2.

Key field	Info field
C7_LINKSET_NUMBER. A number from 0 to 254, used as an index into table C7LKSET.	C7LINK_OMINFO. The Info field has a two-part key: CLLI and C7_SIGLINK_CODE. CLLI is the common language location identifier (CLLI) of the linkset that owns the link. The C7_SIGLINK_CODE is a number from 0 to 15 that identifies the link in the linkset.

Related functional groups

Common Channel Signaling 7 (CCS7) is associated with OM group C7HSLAL2.

Registers

The following table lists the registers associated with OM group C7HSLAL2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7HSLAL2 (Sheet 1 of 2)

Register name	Measures
C7SCSEC	SSCOP connection sum-of-errors counter
C7SCDIS	SSCOP connection disconnect
C7SCIFL	SSCOP connection initiation failure
C7SCRRSY	SSCOP connection re-establishment/ resynchronization

Registers for OM group C7HSLAL2 (Sheet 2 of 2)

Register name	Measures
C7HTSCSC	Hourly marginal performance thresholds exceeded for SSCOP connection sum-of-errors counter
C7SEPSEC	SSCOP errored PDUs sum-of-errors counter
C7USPDUR	Unexpected SSCOP PDUs received
C7ISPDUR	Invalid SSCOP PDUs received
C7SPRLEE	SSCOP PDUs received with list element errors
C7HTSEPC	Hourly marginal performance thresholds exceeded for SSCOP errored pdus sum-of-errors counter
C7SPDURR	SSCOP SD PDUs transmitted requiring retransmission
C7HTSPRR	Hourly marginal performance thresholds exceeded for SSCOP SD PDUs transmitted requiring retransmission
C7SDISS	Duration in the in-service state
C7LOCE	Lack of credit events
C7CDLOC	Cumulative duration of lack of credit
C7CDFEPO	Cumulative duration of far-end processor outage
C7CDLPO	Cumulative duration of local processor outage

C7SCSEC

Register type
Peg

Description
C7SCSEC counts Service Specific Connection Oriented Protocol (SSCOP) connection errors.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7SCDIS

Register type
Peg

Description
C7SCDIS counts lost SSCOP connections.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7SCIFL

Register type
Peg

Description
C7SCIFL counts SSCOP connection initiation failures.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7SCRRSY

Register type
Peg

Description
C7SCRRSY counts SSCOP connection re-establishments and resynchronization

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7HTSCSC

Register type
Peg

Description
C7HTSCSC counts the number of instances in which the total SSCOP connections exceed the hourly marginal performance threshold. The threshold is datafilled in table OFCVAR, parameter C7_SSCOP.CON_SLMPR_THRESHOLD.

Associated registers
None

Extension registers
None

Associated logs
None

C7SEPSEC

Register type
Peg

Description
C7SEPSEC counts errored packet data units (PDU).

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7USPDUR

Register type
Peg

Description
C7USPDUR counts the number of unexpected SSCOP PDUs received.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7ISPDUR

Register type
Peg

Description
C7ISPDUR counts the number of invalid SSCOP PDUs received.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7SPRLEE

Register type
Peg

Description
C7SPRLEE counts the number of SSCOP PDUs received with list element errors.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7HTSEPC

Register type
Peg

Description
C7HTSEPC counts the number of times that the total SSCOP errored PDUs exceed the hourly marginal performance threshold. The threshold is datafilled in table OFCVAR, parameter C7_PDU_ESTOR_SLMPR_THRESHOLD.

Associated registers
None

Extension registers
None

Associated logs
None

C7SPDURR

Register type
Peg

Description
C7SPDURR counts the number of transmitted SSCOP SD PDUs that require retransmission.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7HTSPRR

Register type
Peg

Description
C7HTSPRR counts the number of times that the total transmitted SSCOP SD PDUs requiring retransmission have exceeded the hourly marginal performance threshold. The threshold is datafilled in table OFCVAR, parameter C7_SSCOP_RETIANS_SLMPR_THRESHOLD.

Associated registers
None

Extension registers
None

Associated logs
None

C7SDISS

Register type
Peg

Description
C7SDISS counts the duration of in-service states.

Associated registers
None

Extension registers
C7SDISS2

Associated logs
None

C7LOCE

Register type
Peg

Description
C7LOCE counts the number of lack-of-credit events.

Associated registers
None

Extension registers
None

Associated logs
None

C7CDLOC

Register type
Peg

Description
C7CDLOC counts the cumulative duration of lack-of-credit events, in units of centiseconds.

Associated registers
None

Extension registers
None

Associated logs
None

C7CDFEPO

Register type
Peg

Description
C7CDFEPO counts the cumulative duration of far-end processor outages in units of centiseconds.

Associated registers
None

Extension registers
None

Associated logs
None

C7CDLPO

Register type
Peg

Description
C7CDLPO counts the cumulative duration of local processor outages in units of centiseconds.

Associated registers
None

Extension registers
None

Associated logs
None

C7HSLATM

Description

OM group CCS7 High-speed Link ATM Layer Events (C7HSLATM) provides information on CCS7 high-speed link asynchronous transfer mode (ATM) adaptation layer operations.

The following table lists the key and info fields associated with OM group C7HSLATM.

Key field	Info field
C7_LINKSET_NUMBER. A number from 0 to 254, used as an index into table C7LKSET.	C7LINK_OMINFO. The Info field has a two-part key: CLLI and C7_SIGLINK_CODE. CLLI is the common language location identifier (CLLI) of the linkset that owns the link. The C7_SIGLINK_CODE is a number from 0 to 15 that identifies the link in the linkset.

Related functional groups

Common Channel Signaling 7 (CCS7) is associated with OM group C7HSLATM.

Registers

The following table lists the registers associated with OM group C7HSLATM and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7HSLATM (Sheet 1 of 2)

Register name	Measures
C7RCNDCV	Total received NDC-valid ATM cells
C7TCNDCV	Total transmitted NDC-valid ATM cells
C7RCAUI	Total received ATM user information cells
C7TCAUI	Total transmitted ATM user information
C7DISHEC	Number of cells discarded due to header error control (HEC) violations

Registers for OM group C7HSLATM (Sheet 2 of 2)

Register name	Measures
C7OCDAN	Out-of-cell delineation (OCD) anomalies
C7DISPE	Number of cells discarded due to protocol (ATM-layer Header) errors

C7RCNDCV

Register type
Peg

Description
C7RCNDCV counts the total number of network data collection (NDC)-valid ATM cells received. NDC-valid cells are the cells specified as part of the NDC.

Associated registers
None

Extension registers
C7RCNDC2

Associated logs
None

C7TCNDCV

Register type
Peg

Description
C7TCNDCV counts the total number of NDC-valid ATM cells transmitted.

Associated registers
None

Extension registers
C7TCNDC2

Associated logs
None

C7RCAUI

Register type
Peg

Description
C7RCAUI counts the total number of ATM user information cells received.

Associated registers
None

Extension registers
C7RCAUI2

Associated logs
None

C7TCAUI

Register type
Peg

Description
C7TCAUI counts the total number of ATM user information cells transmitted.

Associated registers
None

Extension registers
C7TCAUI2

Associated logs
None

C7DISHEC

Register type
Peg

Description
C7DISHEC counts the number of cells discarded due to header error control violations.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7OCDAN

Register type
Peg

Description
C7OCDAN counts out-of-cell delineation anomalies.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7DISPE

Register type
Peg

Description
C7DISPE counts the number of cells discarded due to protocol (ATM-layer header) errors.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7HSLCAR

Description

OM group CCS7 High-speed Link Carrier Events (C7HSLCAR) provides information on Common Channel Signaling 7 (CCS7) high-speed link digital carrier operations.

The following table lists the key and info fields associated with OM group C7HSLCAR.

Key field	Info field
C7_LINKSET_NUMBER. A number from 0 to 254, used as an index into table C7LKSET.	C7LINK_OMINFO. The Info field has a two-part key: CLLI and C7_SIGLINK_CODE. CLLI is the common language location identifier (CLLI) of the linkset that owns the link. The C7_SIGLINK_CODE is a number from 0 to 15 that identifies the link in the linkset.

Related functional groups

Common Channel Signaling 7 (CCS7) is associated with OM group C7HSLCAR.

Registers

The following table lists the registers associated with OM group C7HSLCAR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7HSLCAR (Sheet 1 of 2)

Register name	Measures
C7ESL	Errored seconds—line:ES-L
C7CVL	Code violations—line: CV-L
C7SESL	Severely errored seconds—line: SES-L
C7LOSSL	Loss of signal seconds—line: LOSS-L
C7CVP	Code violations—path: CV-P
C7ESP	Errored seconds—path: ES-P

Registers for OM group C7HSLCAR (Sheet 2 of 2)

Register name	Measures
C7SESP	Severely errored seconds—path: SES-P
C7SASP	Severely errored frame/AIS seconds—path: SAS-P
C7UASP	Unavailable seconds—path: UAS-P
C7FCP	Failure count—path: FC-P
C7AISSP	AIS seconds—path: AISS-P
C7ESLF	Far-end errored seconds—line: ES-LFE
C7CVPF	Far-end code violations—path: CV-PFE
C7ESPF	Far-end errored seconds—path: ES-PFE
C7SESPF	Far-end severely errored seconds—path: SES-PFE
C7SEFSPF	Far-end severely errored frame seconds—path: SEFS-PFE
C7UASPF	Far-end unavailable seconds—path: UAS-PFE
C7CSPF	Far-end controlled slips—path: CS-PFE
C7FCPF	Far-end failure count—path: FC-PFE

C7ESL

Register type
Peg

Description
C7ESL counts the number of seconds one or more errors exist on the DS-1 line connection.

Associated registers
None

Extension registers
None

Associated logs
None

C7CVL

Register type
Peg

Description
C7CVL counts the number of code violations on the DS-1 line.

Associated registers
None

Extension registers
None

Associated logs
None

C7SESL

Register type
Peg

Description
C7SESL counts the number of seconds a severe number of errors exist on the DS-1 line.

Associated registers
None

Extension registers
None

Associated logs
None

C7LOSSL

Register type
Peg

Description
C7LOSSL counts the number of seconds during which the signal is lost on the DS-1 line.

Associated registers
None

Extension registers
None

Associated logs
None

C7CVP

Register type
Peg

Description
C7CVP counts the number of code violations on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
None

C7ESP

Register type
Peg

Description
C7ESP counts the number of seconds one or more errors exist on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
CCS125

C7SESP

Register type
Peg

Description
C7SESP counts the number of seconds that a severe number of errors exist on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
CCS125

C7SASP

Register type
Peg

Description
C7SASP counts the number of seconds that a severe number of frame errors or alarm indication signals (AIS) exist on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
None

C7UASP

Register type
Peg

Description
C7UASP counts the number of seconds for which the link is not available for the traffic on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
CCS125

C7FCP

Register type
Peg

Description
C7FCP counts the number of failures on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
None

C7AISSP

Register type
Peg

Description
C7AISSP counts the number of seconds an AIS exists on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
None

C7ESLF

Register type
Peg

Description
C7ESLF counts the number of seconds one or more far-end errors exist on the DS-1 line.

Associated registers
None

Extension registers
None

Associated logs
None

C7CVPF

Register type
Peg

Description
C7CVPF counts the number of far-end code violations on the DS-1 path connection.

Associated registers
None

Extension registers
C7SDISS2

Associated logs
None

C7ESPF

Register type
Peg

Description
C7ESPF counts the number of seconds one or more far-end errors exist on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
CCS125

C7SESPF

Register type
Peg

Description
C7SESPF counts the number of seconds a severe number of far-end errors exist on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
CCS125

C7SEFSPF

Register type
Peg

Description
C7SEFSPF counts the number of seconds that a severe number of far-end frame errors exist on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
None

C7UASPF

Register type
Peg

Description
C7UASPF counts the number of seconds in which the far-end link is not available for the traffic on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
CCS125

C7CSPF

Register type
Peg

Description
C7CSPF counts the number of far-end controlled slips on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
CCS125

C7FCPF

Register type
Peg

Description
C7FCPF counts the number of far-end failures on the DS-1 path connection.

Associated registers
None

Extension registers
None

Associated logs
None

C7LINK1

Description

OM group CCS7 Link Group 1 (C7LINK1) provides information on the failures and recoveries of a Common Channel Signaling 7 (CCS7) link. A CCS7 link is a communication path that moves voice or signaling messages between two signaling points in a CCS7 network.

Links must be synchronized or aligned to move messages between signaling points. The system checks for links that are available and that links, signaling terminals, and network connections are allocated where appropriate.

When a link is synchronized, the system or operating company personnel at signaling point offices, can manipulate the link. The system or operating company personnel can inhibit links or reroute messages to other lines. Message traffic determines the action.

Errors, like negative message acknowledgements (NACK) from the far-end signaling point, signal unit errors, and congestion can occur on a link. The system retransmits some errors and attempts to recover from others. If many errors occur, the link becomes unsynchronized and an alarm to occur in the office. The alarm must be acted upon immediately, unless otherwise indicated.

The C7LINK1 group counts link synchronization errors and link failure recoveries. When a recovery is possible, the link completes message transmission.

The following table lists the key and info fields associated with OM group C7LINK1.

Key field	Info field
C7_LINKSET_NUMBER. A number from 0 to 254, used as an index into table C7LKSET.	C7LINK_OMINFO The information field has a two-part key: CLLI and C7_Sig Link_ Code. The common language location identifier (CLLI) is the linkset CLLI of the linkset that owns the link. The CCS7 signaling link code is a number from 0 to 15 that identifies the specific link in the linkset.

Office parameter C7_SLMPR_ALARM_ON in table OFCVAR indicates when a link exceeds a threshold value. A link minor alarm occurs and the link goes in-service trouble, when:

- the value of the office parameter is TRUE
- a link exceeds the threshold value

Related functional groups

There are no functional groups associated with OM group C7LINK1.

Registers

The following table lists the registers associated with OM group C7LINK1 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7LINK1 (Sheet 1 of 2)

Register name	Measures
C7ABNRFB	CCS7 abnormal forward indicator bit Rx or backward sequence number Rx
C7ALIGNF	CCS7 alignment failure
C7AUTOCO	CCS7 automatic changeovers
C7BSYOFF	CCS7 busy off
C7BSYON	CCS7 busy on
C7CBK	CCS7 changeback
C7COV	CCS7 changeover
C7ERRSEC	CCS7 link errored seconds
C7EXCONG	CCS7 excessive congestion
C7EXDLAY	CCS7 excessive delay
C7EXERR	CCS7 excessive error rate
C7LINH	CCS7 local inhibit
C7LKFAIL	CCS7 link failure
C7LKSYNU	CCS7 link synchronization

Registers for OM group C7LINK1 (Sheet 2 of 2)

Register name	Measures
C7LKUNAU	CCS7 link unavailable
C7LPO	CCS7 local processor outage
C7LUNINH	CCS7 local uninhibit
C7MANB	CCS7 manual busy
C7NACKRX	CCS7 negative acknowledgements
C7NETCON	CCS7 network connection
C7NUCFL	CCS7 nail-up connection failure
C7RINH	CCS7 remote inhibit
C7RPO	CCS7 remote processor outages
C7RUNINH	CCS7 remote uninhibit
C7SLTFL	CCS7 signaling link test failure
C7STALFL	CCS7 signaling terminal allocation failure
C7SUERR	CCS7 signal units error
C7TLALFL	CCS7 transmission link allocation failure
C7CLB	Number of times that controlled link blocking (CLB)

C7ABNRFB

Register type
Peg

Description
C7ABNRFB counts CCS7 link synchronization failures. Abnormal forward indicator bits (FIB) or backward sequence numbers (BSN) that the signaling terminal (ST) receives cause of failures. When link synchronization fails, an alarm occurs. C7ABNRFB increases in the central control (CC).

Associated registers
C7EXCONG, C7EXDLAY, C7EXERR, C7LKFAIL

Validation formula
C7LINK1_C7ABNRFB + C7LINK1_C7EXDLAY + C7LINK1_C7EXERR + C7LINK1_C7EXCONG ≤C7LINK1_C7LKFAIL

Extension registers
None

Associated logs
CCS101

C7ALIGNF

Register type
Peg

Description
C7ALIGNF counts CCS7 link synchronization failures that occur during the alignment or proving period when the system checks links for synchronization. The signaling link cannot synchronize because of this failure, and an alarm continues. The register increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
None

C7AUTOCO

Register type
Peg

Description
C7AUTOCO counts CCS7 automatic changeovers (traffic reroutes) away from the link. An automatic changeover is one that operating company personnel do not initiate. A changeover indicates that traffic was diverted away from a common channel signaling link.

Associated registers
None

Extension registers
None

Associated logs
None

C7BSYOFF

Register type
Peg

Description
C7BSYOFF counts the busy signal transmission stops at the signaling terminal (ST). A busy signal transmission stop indicates that the link recovered from congestion. The register increases in the ST and transfers to the central control (CC) during the OM transfer process.

Associated registers
None

Extension registers
None

Associated logs
None

C7BSYON

Register type
Peg

Description
C7BSYON counts the busy signal transmission starts at the ST. A busy signal transmission start indicates congestion on the link that can cause a link failure. C7BSYON increases in the ST. The system transfers the register to the central control (CC) during the OM transfer process.

Associated registers
None

Extension registers
None

Associated logs
None

C7CBK

Register type
Peg

Description
C7CBK counts changebacks on the link. A changeback is traffic that the system reroutes and returns to the link. Changebacks indicate an improvement in common channel signaling conditions. C7CBK increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
CCS163

C7COV

Register type
Peg

Description
C7COV counts changeovers (traffic reroutes) away from the link. A changeover indicates that the system diverted traffic away from a common channel signaling link. An alarm occurs.

Associated registers
None

Extension registers
None

Associated logs
CCS164

C7ERRSEC

Register type
Peg

Description
C7ERRSEC reports the length of time the system detects a minimum of one in-service error on a signaling link.

Associated registers
C7SUERR

Extension registers
None

Associated logs
None

C7EXCONG

Register type
Peg

Description
C7EXCONG counts CCS7 link synchronizations that fail because of prolonged congestion on the link. The failure causes an alarm. C7EXCONG increases in the central control (CC).

Associated registers
C7ABNRFB, C7EXDLAY, C7EXERR, C7LKFAIL

Validation formula
C7LINK1_C7ABNRFB + C7LINK1_C7EXDLAY + C7LINK1_C7EXERR + C7LINK1_C7EXCONG ≤C7LINK1_C7LKFAIL

Extension registers
None

Associated logs
CCS101

C7EXDLAY

Register type
Peg

Description
C7EXDLAY counts CCS7 link synchronizations that fail because the far-end ST delays the acknowledgement of messages that were sent. Link synchronization failure causes an alarm. C7EXDLAY increases in the central control (CC).

Associated registers
C7ABNRFB, C7EXCONG, C7EXERR, C7LKFAIL

Validation formula
C7LINK1_C7ABNRFB + C7LINK1_C7EXDLAY + C7LINK1_C7EXERR + C7LINK1_C7EXCONG ≤C7LINK1_C7LKFAIL

Extension registers
None

Associated logs
CCS101

C7EXERR

Register type
Peg

Description
C7EXERR counts CCS7 link synchronizations that fail because the ST detects excessive signal unit errors. Link synchronization failure causes an alarm. C7EXERR increases in the central control (CC).

Associated registers
C7ABNRFB, C7EXCONG, C7EXDLAY, C7LKFAIL

Validation formula
C7LINK1_C7ABNRFB + C7LINK1_C7EXDLAY + C7LINK1_C7EXERR + C7LINK1_C7EXCONG ≤C7LINK1_C7LKFAIL

Extension registers
None

Associated logs
CCS101

C7LINH

Register type
Peg

Description
C7LINH increases when local inhibit is applied to the link. Local inhibit is a procedure that diverts traffic away from the link. Application of local inhibit causes an alarm. C7LINH increases in the central control (CC).

Associated registers
C7LUNINH

Validation formula
C7LINK1_C7LINH = C7LINK1_C7LUNINH, when the link does not have an inhibit indication

Extension registers
None

Associated logs
CCS159

C7LKFAIL

Register type
Peg

Description
C7LKFAIL counts CCS7 link synchronization failures. The register counts in-service link failures. This register does not count link activation failures (link not in-service failures). Link synchronization causes an alarm. C7LKFAIL increases in the central control (CC).

Associated registers
C7ABNRFB, C7EXCONG, C7EXDLAY, C7EXERR

Any difference represents link failures that occur from other causes.

Validation formula
C7LINK1_C7ABNRFB + C7LINK1_C7EXDLAY + C7LINK1_C7EXERR + C7LINK1_C7EXCONG ≤C7LINK1_C7LKFAIL

Extension registers
None

Associated logs
CCS101

C7LKSYNU

Register type
Usage

Scan rate
10 seconds

Description
C7LKSYNU records if a CCS7 link is synchronized and able to carry signaling units to the far-end ST. If the register does not increase every 10 seconds, the link failed. When a link fails, an alarm occurs. This action does not indicate that the link is for traffic. C7LKSYNU increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
CCS101, CCS102

C7LKUNAU

Register type
Usage

Scan rate
10 seconds

Description
C7LKUNAU records if a link is not available for traffic.

Associated registers
None

Extension registers
None

Associated logs
CCS163, CCS164

C7LPO

Register type
Peg

Description
C7LPO counts local processor outages (LPO) that the ST detects. The register controls:

- message switch and buffer (MSB7) outages
- events during which the local processor is manual busy (the link is taken out of service manually)
- events during which inhibit procedures control a link

If an MSB7 outage caused the LPO, a serious problem occurred. If manual busy or inhibit procedures caused the LPO, an alarm occurs. C7LPO increases in the ST and transfers to the central control (CC) during the OM transfer process.

Associated registers
None

Extension registers
None

Associated logs
PM102, PM105

C7LUNINH

Register type
Peg

Description
C7LUNINH increases when local inhibiting status is removed from the link. The link can serve traffic if all other controls and problems can be serviced. C7LUNINH increases in the central control (CC).

Associated registers
C7LINH

Validation formula
C7LINK1_C7LUNINH = C7LINK1_C7LINH, when the link does not have an inhibit indication.

Extension registers
None

Associated logs
CCS161

C7MANB

Register type
Peg

Description
C7MANB increases when the link is manual busy. Manual busy indicates that operating company personnel control a link. An alarm can occur. C7MANB increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
CCS157

C7NACKRX

Register type
Peg

Description
C7NACKRX counts negative acknowledgements received from the far-end signaling terminal (ST). Negative acknowledgement indicates that messages are not correctly received. The messages are transmitted again. C7NACKRX increases in the ST and transfers to the central control (CC) during the OM transfer process.

Associated registers
None

Extension registers
None

Associated logs
None

C7NETCON

Register type
Peg

Description
C7NETCON increases when link synchronization fails. Link synchronization fails because of failure to connect with the network. An alarm occurs. C7NETCON increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
None

C7NUCFL

Register type
Peg

Description
C7NUCFL increases when link activation cannot establish a permanent network connection. A synchronized link that does not have a permanent network connection cannot survive a central control (CC) restart. The link continues to operate and service is not affected. C7NUCFL increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
CCS108

C7RINH

Register type
Peg

Description
C7RINH increases when operating company personnel apply remote inhibit to the link in order to divert traffic away from the link. An alarm occurs in the CCS7 system. C7RINH increases in the central control (CC).

Associated registers
C7RUNINH

Validation formula
C7LINK1_C7RINH = C7LINK1_C7RUNINH when the link does not have an inhibit indication

Extension registers
None

Associated logs
CCS160

C7RPO

Register type
Peg

Description
C7RPO counts remote processor outages ST reports. Remote processor outages indicate that the link is not able to deliver traffic. An alarm occurs. The local office must wait for the far-end signaling point to recover. C7RPO increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
CCS104

C7RUNINH

Register type
Peg

Description
C7RUNINH increases when remote inhibiting is removed from a link. If other controls or problems are not present on the link, the link can be used.

Associated registers
C7RINH

Validation formula
C7LINK1_C7RINH = C7LINK1_C7RUNINH when the link does not have an inhibit indication

Extension registers
None

Associated logs
CCS162

C7SLTFL

Register type
Peg

Description
C7SLTFL increases when signaling cannot take place because of a signaling link test (SLT) failure, which indicates that the system cannot synchronize a link. An alarm occurs in the CCS7 system. C7SLTFL increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
CCS101, CCS107

C7STALFL

Register type
Peg

Description
C7STALFL increases when signaling cannot take place because the ST cannot be allocated. The system cannot synchronize a link. An alarm occurs in the CCS7 system. C7STALFL increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
None

C7SUERR

Register type
Peg

Description
C7SUERR counts signal units on a link received in error. The count in this register is the number of messages that are not received correctly from the far-end signaling point. The messages are transmitted. C7SUERR increases in the signaling terminal and transferred to the central control (CC) during the OM transfer process.

Associated registers
C7ERRSEC

Extension registers
None

Associated logs
None

C7TLALFL

Register type
Peg

Description
C7TLALFL increases when signaling cannot take place. Signaling cannot take place because a transmission link cannot be allocated. The

system cannot synchronize a link. An alarm occurs. C7TLALFL increases in the central control (CC).

Associated registers
None

Extension registers
None

Associated logs
None

C7CLB

Register type
Peg

Description
C7CLB increases when C7CLB is applied to the link during an OM period. C7CLB also stores the period of time that CLB was applied to the link during the last OM period.

Associated registers
None

Extension registers
None

Associated logs
CCS193

C7LINK2

Description

CCS7 link group 2 (C7LINK2)

The OM group C7LINK2 provides information on calls and congestion for Common Channel Signaling 7 (CCS7). ACCS7 link is a communication path. This path moves voice or signaling messages between two signaling transfer points (STP) in a CCS7 network system.

This register counts the following types of congestion that impede the flow of signaling messages on a link:

- link congestion detected in the link-handling peripheral. A link-handling peripheral is a message switch and buffer (MSB), a CCS7 link interface unit (LIU7) or a high-speed link interface unit (HLIU)
- transmission buffer congestion detected in the signaling terminals

The system measures link congestion against three set thresholds. The user part gives messages a priority from zero to three. The system compares the priority threshold to the congestion threshold to determine if it should send the message. The system transmits messages with priorities equal to or greater than the congestion threshold. The system discards other messages.

The system measures transmission buffer congestion against three thresholds that are set to determine the onset of congestion in the buffer. The system also measures the three thresholds set to determine the abatement of congestion. An overflow threshold and corresponding abatement threshold also exist.

The LIU7 or HLIU handles all functions that the CCS7 must perform for each link. Registers count the following:

- messages that are lost or not sequenced correctly
- messages that originate and terminate at the signal transfer point
- messages that are passed on to other signaling transfer points

The following registers reside in the signaling terminal (ST):

- register C7BYTRT
- register C7BYTRTX
- register C7BYTRX
- register C7BYTRX2

- register C7BYTTX
- register C7BYTTX2
- register C7MSURX
- register C7MSURX2 • register C7MSUTX
- register C7MSUTX2
- register C7MSUDSC

Register C7STRET increases when the information that these registers collect is transferred to a holding register in the central control (CC). Registers C7MSUDC1, C7MSUDC2, and C7MSUDC3 reside in the link-handling peripheral module. Register C7MSBRET increases when the information that these registers collect is transferred to a holding register in the CC.

OM group C7LINK2 provides one tuple for each key.

- C7_LINKSET_NUMBER
  is a number in the range 0 to 254,used as an index into table C7LKSET.
- C7LINK_OMINFO
  information field has a two-part key named CLLI, C7_Sig_Link_Code.

  The CLLI is the linkset common language location identifier (CLLI) of the linkset that owns the link. The CCS7 signaling link code is a number from 0 to 15 that identifies an exact link in a linkset.

Key field	Info field
C7_LINKSET_NUMBER	C7LINK_OMINFO

Related functional groups

There are no related functional groups associated with OM group C7LINK2.

Registers

The following table lists the registers associated with OM group C7LINK2 and what they measure. For a description of a register, click on the register name.

Registers for OM group C7LINK2

Register name	Measures
C7ABATE1	CCS7 abatement threshold 1 (C7ABATE1)
C7ABATE2	CCS7 abatement threshold 2 (C7ABATE2)
C7ABATE3	CCS7 abatement threshold 3 (C7ABATE3).
C7ABATEV	CCS7 abatement overflow (C7ABATEV)
C7BYTRT	CCS7 bytes retransmitted (C7BYTRT)
C7BYTRX	CCS7 bytes received (C7BYTRX)
C7BYTTX	CCS7 bytes transmitted (C7BYTTX)
C7MSBRET	CCS7 message switch buffer retrieval (C7MSBRET)
C7MSGLOS	CCS7 messages lost (C7MSGLOS)
C7MSGMSQ	CCS7 messages mis-sequenced (C7MSGMSQ)
C7MSUDC1	CCS7 messages discarded because of congestion level 1 (C7MSUDC1)
C7MSUDC2	CCS7 messages discarded because of congestion level 2 (C7MSUDC2)
C7MSUDC3	CCS7 messages discarded because of congestion level 3 (C7MSUDC3)
C7MSUDSC	CCS7 messages discarded (C7MSUDSC)
C7MSUOR	CCS7 messages originated (C7MSUOR)
C7MSURX	CCS7 messages received (C7MSURX)
C7MSUTE	CCS7 messages terminated (C7MSUTE)

Registers for OM group C7LINK2

Register name	Measures
C7MSUTS	CCS7 messages through-switched (C7MSUTS)
C7MSUTX	CCS7 messages transmitted (C7MSUTX)
C7ONSET1	CCS7 onset threshold 1 (C7ONSET1)
C7ONSET2	CCS7 onset threshold 2 (C7ONSET2)
C7ONSET3	CCS7 onset threshold 3 (C7ONSET3)
C7ONSETV	CCS7 onset overflow (C7ONSETV)
C7STRET	CCS7 signal terminal retrieval (C7STRET)

C7ABATE1

Register type
Peg

Description
CCS7 abatement threshold 1 (C7ABATE1)

C7ABATE1 increases when the transmission buffer congestion for the signaling terminal (ST) falls below the first abatement threshold. This register collects data in the CC.

Associated registers
Register C7ABATE2 increases when ST transmission buffer congestion falls below the second abatement threshold. Register C7ABATE3 increases when ST transmission buffer congestion falls below the third abatement threshold.

Extension registers
There are no extension registers.

Associated logs
The system generates log CCS173 when the transmission buffer of a CCS link is congested.

C7ABATE2

Register type
Peg

Description
CCS7 abatement threshold 2 (C7ABATE2)

Register C7ABATE2 increases when ST transmission buffer congestion falls below the second abatement threshold. This register collects data in the CC.

Associated registers
Register C7ABATE1 increases when ST transmission buffer congestion falls below the first abatement threshold. Register C7ABATE3 increases when ST transmission buffer congestion falls below the third abatement threshold.

Extension registers
There are no extension registers.

Associated logs
The system generates log CCS173 when the transmission buffer of a CCS link is congested.

C7ABATE3

Register type
Peg

Description
CCS7 abatement threshold 3 (C7ABATE3).

Register C7ABATE3 increases when ST transmission buffer congestion falls below the third abatement threshold. This register collects data in the CC.

Associated registers
Register C7ABATE1 increases when ST transmission buffer congestion falls below the first abatement threshold. Register C7ABATE2 increases when ST transmission buffer congestion falls below the second abatement threshold.

Extension registers
There are no extension registers.

Associated logs
The system generates log CCS173 when the transmission buffer of a CCS link is congested.

C7ABATEV

Register type
Peg

Description
CCS7 abatement overflow (C7ABATEV)

Register C7ABATEV increases when the signaling terminal ST transmission buffer congestion falls below the ST transmission buffer overflow threshold. Messages of all priorities are transmitted. This register collects data in the CC.

Associated registers
Register C7ABATE1 increases when ST transmission buffer congestion falls below the first abatement threshold. Register C7ABATE2 counts the number of times the ST transmission buffer congestion falls below the second abatement threshold. Register C7ABATE3 counts the number of times ST transmission buffer congestion level falls below the third abatement threshold.

Extension registers
There are no extension registers.

Associated logs
The system generates log CCS173 when the transmission buffer of a CCS7 link is congested.

C7BYTRT

Register type
Peg

Description
CCS7 bytes retransmitted (C7BYTRT)

Register C7BYTRT counts bytes that the ST transmits again. These bytes include the data service information (SIO) and signaling information field (SIF) data. These bytes do not include the sequence number, length, and priority checking data. This data is referred to as level 2 overhead data.

Associated registers
Register C7STRET increases when the information collected in the following registers is transferred from the ST to the CC:

- register C7BYTRT
- register C7BYTRT2

- register C7BYTRX
- register C7BYTRX2
- register C7BYTTX
- register C7BYTTX2
- register C7MSURX
- register C7MSURX2
- register C7MSUTX
- register C7MSUTX2
- register C7MSUDC1

Extension registers
C7BYTRT2

Associated logs
There are no associated logs.

C7BYTRX

Register type
Peg

Description
CCS7 bytes received (C7BYTRX)

Register C7BYTRX counts bytes that the ST receives. These bytes include the SIO and SIF data. These bytes do not include the sequence number, length, and priority checking overhead data. This data is referred to as level 2

Associated registers
Register C7STRET increases when the information collected in the following registers is transferred from the ST to the CC:

- register C7BYTRT
- register C7BYTRT2
- register C7BYTRX
- register C7BYTRX2
- register C7BYTTX
- register C7BYTTX2
- register C7MSURX
- register C7MSURX2

- register C7MSUTX
- register C7MSUTX2
- register C7MSUDC1

Extension registers
C7BYTRX2

Associated logs
There are no associated logs.

C7BYTTX

Register type
Peg

Description
CCS7 bytes transmitted (C7BYTTX)

Register C7BYTTX counts bytes that the ST transmits. These bytes include the SIO and SIF data. These bytes do not include the sequence number, length, and priority checking data. This data is referred to as level 2 overhead data.

Associated registers
Register C7STRET increases when information collected in the following registers is transferred from the ST to the CC:

- register C7BYTRT
- register C7BYTRT2
- register C7BYTRX
- register C7BYTRX2
- register C7BYTTX
- register C7BYTTX2
- register C7MSURX
- register C7MSURX2
- register C7MSUTX
- register C7MSUTX2
- register C7MSUDC1

Extension registers
C7BYTTX2

Associated logs
There are no associated logs.

C7MSBRET

Register type
Peg

Description
CCS7 message switch buffer retrieval (C7MSBRET)

Register C7MSBRET increases when information is transferred to a holding registers in the CC. Registers that reside in the link-handling peripheral module (PM), which is an MSB, LIU7, or HLIU, collect this information. Registers C7MSUDC1, C7MSUDC2, and C7MSUDC3 reside in the PM that handles the link.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7MSGLOS

Register type
Peg

Description
CCS7 messages lost (C7MSGLOS)

Register C7MSGLOS counts messages that are lost on paths from an incoming LIU7 or HLIU link to all outgoing LIU7 or HLIU links in the STP.

To find the reliability of the signal transfer point in terms of message loss, perform the following calculation. Compare the sum of register C7MSGLOS for all links to the sum of registers C7MSURX and C7MSURX2.

Associated registers
To find the performance measurement of the reliability of the signal transfer point, in terms of message loss, perform the following calculation. Compare the sum of register C7MSGLOS to the sum of registers C7MSURX and C7MSURX2.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS400 when a path from one LIU7, HLIU, or HSLR to another is defective.

C7MSGMSQ

Register type
Peg

Description
CCS7 messages mis-sequenced (C7MSGMSQ)

Register C7MSGMSQ counts messages that are received out of their correct order on paths from all incoming LIU7 or HLIU links. The messages are sent to a given destination LIU7 or HLIU in the STP. This register collects data in the destination LIU7 or HLIU. This register also provides a cumulative count of all messages that are not sequenced correctly on all paths to the destination.

To find a performance measurement of the reliability of the STP in terms of message sequencing, perform the following calculation. Compare the sum of register C7MSGMSQ for all links to the sum of the OM that counts messages received (C7MSURX/C7MSURX2).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7MSUDC1

Register type
Peg

Description
CCS7 messages discarded because of congestion level 1 (C7MSUDC1)

Register C7MSUDC1 counts messages discarded by the PM (MSB, LIU7, or HLIU) that supports the link experiencing congestion level 1.

If this count increases, take action to improve link transmission or to reduce the traffic load on the link. This register collects data in the PM that handles the link. This register is transferred to the CC during the OM transfer process.

Associated registers
Register C7MSUDC2 counts messages discarded by the PM that handles the link. Link congestion at level 2 causes the PM to discard the messages.

Register C7MSUDC3 counts the number of messages discarded by the PM that handles the link. Link congestion at level 3 causes the PM to discard the messages.

Register C7MSBRET increases when information collected in C7MSUDC1 is transferred from the PM that handles the link to the CC.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7MSUDC2

Register type
Peg

Description
CCS7 messages discarded because of congestion level 2 (C7MSUDC2)

Register C7MSUDC2 counts messages discarded by the PM that handles the link. The PM discards the messages when signal routing is at link congestion level 2.

If this count increases, take action to improve link transmission or to reduce the traffic load on the link. This register collects data in the PM that handles the link. This register is transferred to the CC during the OM transfer process.

Associated registers
Register C7MSUDC1 counts messages discarded by the PM that handles the link. Link congestion at level 1 causes the PM to discard messages.

Register C7MSUDC3 counts messages discarded by the PM that handles the link. Link congestion at level 3 causes the PM to discard the signal message units.

Register C7MSBRET increases when information collected in C7MSUDC2 is transferred from the PM that handles the links to the CC.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7MSUDC3

Register type
Peg

Description
CCS7 messages discarded because of congestion level 3 (C7MSUDC3)

Register C7MSUDC3 counts messages discarded by the PM (an MSB, LIU7, or HLIU link) that supports the link experiencing link congestion level 3.

If this count increases, take action to improve link transmission or reduce the traffic load on the link. This register collects data in the link-handling PM and transfers to the CC during the OM transfer process.

Associated registers
Register C7MSUDC1 counts messages discarded by the link-handling PM because of link congestion at level 1.

Register C7MSUDC2 counts messages discarded by the link-handling PM because of link congestion at level 2.

Register C7MSBRET increases when information collected in C7MSUDC3 transfers from the link-handling PM to the CC.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7MSUDSC

Register type
Peg

Description
CCS7 messages discarded (C7MSUDSC)

Register C7MSUDSC counts message signal units that the ST discards because of congestion overflow in the transmission buffer beyond congestion level 3. If this count persists, take action to improve link transmission or reduce the traffic load on the link. This register collects data in the ST and transfers to the CC during the OM transfer process.

Associated registers
Register C7STRET increases when the information collected in the following registers is transferred from the ST to the CC:

- Register C7BYTRT
- Register C7BYTRT2
- Register C7BYTRX
- Register C7BYTRX2
- Register C7BYTTX
- Register C7BYTTX2
- Register C7MSURX
- Register C7MSURX2
- Register C7MSUTX
- Register C7MSUTX2
- Register C7MSUDC1

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7MSUOR

Register type
Peg

Description
CCS7 messages originated (C7MSUOR)

Register C7MSUOR counts messages that originate at the ST. Messages that originate at the ST include global title translations (GTT) and management messages.

This register is activated only for LIU7 or HLIU.

Associated registers
There are no associated registers.

Extension registers
C7MSUOR2

Associated logs
There are no associated logs.

C7MSURX

Register type
Peg

Description
CCS7 messages received (C7MSURX)

Register C7MSURX counts messages the ST received.

This register collects data in the ST and transfers to the CC during the OM transfer process.

Associated registers
Register C7STRET increases when the information collected in the following registers is transferred from the ST to the CC:

- Register C7BYTRT
- Register C7BYTRT2
- Register C7BYTRX
- Register C7BYTRX2
- Register C7BYTTX
- Register C7BYTTX2
- Register C7MSURX
- Register C7MSURX2
- Register C7MSUTX
- Register C7MSUTX2
- Register C7MSUDC1

Extension registers
C7MSURX2

Associated logs
There are no associated logs.

C7MSUTE

Register type
Peg

Description
CCS7 messages terminated (C7MSUTE)

Register C7MSUTE counts messages that terminate at the node.

This register is activated for products based on the LIU7 or HLIU.

Associated registers
There are no associated registers.

Extension registers
C7MSUTE2

Associated logs
There are no associated logs.

C7MSUTS

Register type
Peg

Description
CCS7 messages through-switched (C7MSUTS)

Register C7MSUTS counts messages that an STP or integrated node (INode) relays to other signaling points.

Associated registers
There are no associated registers.

Extension registers
C7MSUTS2

Associated logs
There are no associated logs.

C7MSUTX

Register type
Peg

Description
CCS7 messages transmitted (C7MSUTX)

Register C7MSUTX counts messages that the ST transmits.

This register collects data in the ST and is transferred to the CC during the OM transfer process.

Associated registers
Register C7STRET increases when the information collected in the following registers is transferred from the ST to the CC:

- Register C7BYTRT
- Register C7BYTRT2
- Register C7BYTRX
- Register C7BYTRX2
- Register C7BYTTX
- Register C7BYTTX2
- Register C7MSURX
- Register C7MSURX2
- Register C7MSUTX
- Register C7MSUTX2
- Register C7MSUDC1

Extension registers
C7MSUTX2

Associated logs
There are no associated logs.

C7ONSET1

Register type
Peg

Description
CCS7 onset threshold 1 (C7ONSET1)

Register C7ONSET1 increments when ST transmission buffer congestion passes the first onset threshold. The user must enter thresholds in table C7CNGSTN.

When congestion passes the first threshold, the system discards messages of priority 0. The link transports messages of priority 1, 2, and 3. If congestion persists the user must improve link transmission or reduce the traffic load on the link. This register collects data in the CC.

Associated registers
Register C7ONSET2 2 increases when ST transmission buffer congestion passes the second onset threshold.

Register C7ONSET3 increases when ST transmission buffer congestion passes the third onset threshold.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS173 when the transmission buffer of a CCS7 link is congested.

C7ONSET2

Register type
Peg

Description
CCS7 onset threshold 2 (C7ONSET2)

Register C7ONSET2 increments when ST transmission buffer congestion passes the second onset threshold.

When congestion passes the second threshold, the system discards messages of priority zero. The link will transport messages of priority 2 and 3. If congestion persists, the user must improve link transmission or reduce the traffic load on the link. This register collects data in the CC.

Associated registers
Register C7ONSET1 increases when ST transmission buffer congestion passes the first onset threshold.

Register C7ONSET3 increases when ST transmission buffer congestion passes the third onset threshold.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS173 when the transmission buffer of a CCS7 link is congested.

C7ONSET3

Register type
Peg

Description
CCS7 onset threshold 3 (C7ONSET3)

Register C7ONSET3 increments when ST transmission buffer congestion passes the third onset threshold.

When congestion passes the third threshold, the system discards messages of priority 0 and 1. The link will transport messages of priority 3. If congestion persists, the user must take action to improve link transmission or reduce the traffic load on the link. This register collects data in the CC.

Associated registers
Register C7ONSET1 increases when ST transmission buffer congestion passes the first onset threshold.

Register C7ONSET2 increases when ST transmission buffer congestion passes the second onset threshold.

Extension registers
There are no extension registers.

Associated logs
The system generates log CCS173 when the transmission buffer of a CCS7 link is congested.

C7ONSETV

Register type
Peg

Description
CCS7 onset overflow (C7ONSETV)

Register C7ONSETV increases when messages overflow the ST transmission buffer. When this occurs, the system discards all calls. This register collects data in the CC.

Associated registers
Register C7ONSET1 increases when ST transmission buffer congestion passes the first onset threshold.

Register C7ONSET2 increases when ST transmission buffer congestion passes the second onset threshold.

Register C7ONSET3 increases when the ST transmission buffer congestion passes the third onset threshold.

Extension registers
There are no extension registers.

Associated logs
The system generates log CCS173 when the transmission buffer of a CCS link is congested.

C7STRET

Register type
Peg

Description
CCS7 signal terminal retrieval (C7STRET)

Register C7STRET increases when the information that registers collect transfers to a holding register in the CC. These registers are in the ST of the link.

The registers in the ST of the link are as follows:

- Register C7BYTRT
- Register C7BYTRT2
- Register C7BYTRX
- Register C7BYTRX2
- Register C7BYTTX
- Register C7BYTTX2
- Register C7MSURX
- Register C7MSURX2
- Register C7MSUTX

- Register C7MSUTX2
- Register C7MSUDC1

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7LINK3

Description

OM group Common Channel Signaling 7 (CCS7) Link Group 3 (C7LINK3) monitors the traffic and performance of a message signal unit (MSU) for a CCS7 link. Message signal units are part of a signal.

Some registers count MSU octets that originate, terminate, and connect through a switch through an office. The registers also monitor MSU traffic. The following components measure performance:

- registers that count the number of times that local and remote processors are not in service
- MSUs that the system loses because no buffers are available to store messages
- usage registers that record link levels 1, 2, and 3 of congestion on a CCS7 link.

C7MSOR, C7MSOR2, C7MSTE, C7MSTE2, C7MSTS, C7MSTS2, and C7MSUBOV in OM group C7LINK3 only apply to LPP-based CCS7 nodes. These registers are not valid on MSB7-based nodes.

The system uses the OM group C7LINK3 in the Signaling Engineering Administration System (SEAS) for CCS7 offices. Data in C7MTP goes to the signaling engineering administration controller (SEAC) for use in SEAS.

For the SEAC to collect the correct data, table OMACC must define three classes to accumulate the required 30-minute, 60-minute, and 24-hour collection periods. Modify tables OFCOPT and OFCENG to provide the required 5-minute reports for SEAC.

The SEAC OM collection requirements require the following table modifications:

- Add SEAS_30M, SEAS_60M, and SEAS_24H to table OMACC.
- Add group C7LINK3 and corresponding fields (registers) to each of the three classes.
- Set OMHISTORYON to Y in table OFCOPT.
- Set OMXFR to X15 in table OFCENG.

The following table lists the key and info fields associated with OM group C7LINK3.

Key field	Info field
C7_LINKSET_NUMBER, a number in the range 0 to 254, used as an index into table C7LKSET	C7LINK_OMINFO

Related functional groups

The following functional groups are associated with OM group C7LINK3:

- SEAS
- SEAC
- CCS7

Registers

The following table lists the registers associated with OM group C7LINK3 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7LINK3 (Sheet 1 of 2)

Register name	Measures
C7BFOVL	CCS7 buffer overflow
C7HWILLP	CCS7 high-water for ILLP interface
C7HWMTS	CCS7 high-water mark for MTS interface
C7HWST	CCS7 high-water mark for ST interface
C7HWTOT	CCS7 high-water mark total interfaces
C7LPOU	CCS7 local processor outage
C7LV1CGU	CCS7 level 1-link congestion
C7LV2CGU	CCS7 level 2-link congestion
C7LV3CGU	CCS7 level 3-link congestion
C7MSOR	CCS7 message signal unit (MSU) octets originated

Registers for OM group C7LINK3 (Sheet 2 of 2)

Register name	Measures
C7MSTE	CCS7 message signal unit (MSU) octets terminated
C7MSTS	CCS7 message signal unit (MSU) octets through-switched
C7MSUBOV	CCS7 message signal unit (MSU) buffer overflow
C7RPOU	CCS7 remote processor outages
C7RTOVLD	CCS7 real time overload
C7CLBU	CCS7 message controlled link blocking

C7BFOVL

Register type
Peg

Description
C7BFOVL counts the times the system discards a message because message buffers are not available in the CCS7 link interface unit (LIU7). The register is set to zero (0).

Associated registers
None

Extension registers
None

Associated logs
None

C7HWILLP

Register type
Peg

Description
C7HWILLP counts the highest number of messages or MSUs that are received in 1 second from the ILLP interface. The register is set to zero (0).

Associated registers
None

Extension registers
None

Associated logs
None

C7HWMTS

Register type
Peg

Description
C7HWMTS counts the highest number of messages or MSUs received in 1 second from the MTS interface. The register is set to zero (0).

Associated registers
None

Extension registers
None

Associated logs
None

C7HWST

Register type
Peg

Description
C7HWST counts the highest number of messages or MSUs received in 1 second from the signaling terminal (ST) interface. The register is set to zero (0).

Associated registers
None

Extension registers
None

Associated logs
None

C7HWTOT

Register type
Peg

Description
C7HWTOT counts the highest number of messages or MSUs received in 1 second from all interfaces (ILLP, MTS, and ST). The register is set to zero (0).

Associated registers
None

Extension registers
None

Associated logs
None

C7LPOU

Register type
Usage

Scan rate
10 seconds

Description
C7LPOU records each local processor outage (LPO) that the signaling terminal (ST) detects. The following conditions can cause outages:

- a CCS7-message switch and buffer (MSB7) outage exists (indicates a significant error)
- the local processor is manual busy (causes an alarm)
- inhibit procedures control a link (causes an alarm)

C7LPOU increases in the ST and transfers to the central control (CC) during the OM transfer process.

Associated registers
C7RPOU, DRLCLPRO in SEAS

Extension registers
None

Associated logs
PM102, PM105

C7LV1CGU

Register type
Usage

Scan rate
10 seconds

Description
C7LV1CGU records level 1-link congestion on a CCS7 link. Table C7CNGSTN contains descriptions of thresholds of link congestion.

Associated registers
TDCNGLVI in SEAS

Extension registers
None

Associated logs
None

C7LV2CGU

Register type
Usage

Scan rate
10 seconds

Description
C7LV2CGU records level 2 congestion on a CCS7 link. Table C7CNGSTN contains descriptions of thresholds of link congestion.

Associated registers
TDCNGLV2 in SEAS

Extension registers
None

Associated logs
None

C7LV3CGU

Register type
Usage

Scan rate
10 seconds

Description
C7LV3CGU records level 3 congestion on a CCS7 link. Table C7CNGSTN contains descriptions of thresholds of link congestion.

Associated registers
TDCNGLV3 in SEAS

Extension registers
None

Associated logs
None

C7MSOR

Register type
Peg

Description
C7LV2CGU records level 2 congestion on a CCS7 link. Table C7CNGSTN contains descriptions of thresholds of link congestion.

Associated registers
ORMSUOUT in SEAS

Extension registers
C7MSOR2

Associated logs
None

C7MSTE

Register type
Peg

Description
C7MSTE counts MSU octets that terminate on a CCS7 link in an office. The register includes management MSUs and global title translations that generate new messages. C7MSTE and C7MSTE2 apply to LPP-based CCS7 nodes, and are not valid on MSB7-based nodes.

Associated registers
TSMSUOUT in SEAS

Extension registers
C7MSTE2

Associated logs
None

C7MSTS

Register type
Peg

Description
C7MSTS counts MSU octets that switch through an office. The register does not include global title translations. C7MSTS and C7MSTS2 apply to LPP-based CCS7 nodes, and are not valid on MSB7-based nodes.

Associated registers
TSMSUOCT in SEAS

Extension registers
C7MSTS2

Associated logs
None

C7MSUBOV

Register type
Peg

Description
C7MSUBOV counts MSUs that the system loses because buffers are not available to store messages. The register applies to LPP-based CCS7 nodes, and is not valid on MSB7-based nodes.

Associated registers
None

Extension registers
None

Associated logs
None

C7RPOU

Register type
Usage

Scan rate
10 seconds

Description
C7RPOU records remote processor outages the signaling terminal (ST) reports. Remote processor outages indicate that the link is not able to deliver traffic. The system raises an alarm. The local office must wait for the far-end signaling point to recover. The central control (CC) counts C7RPOU.

Associated registers
C7LPOU, DRFEPRO in SEAS

Extension registers
None

Associated logs
None

C7RTOVLD

Register type
Peg

Description
C7RTOVLD counts the number of messages or MSUs that the system discards because an overload occurs in the LIU7. The register is set to zero (0).

Associated registers
None

Extension registers
None

Associated logs
None

C7CLBU

Register type
Usage

Scan rate
10 seconds

Description
C7CLBU stores the time that the system applies controlled link blocking to the link during an OM period.

Associated registers
None

Extension registers
None

Associated logs
CCS193

C7LINK4

Description

OM group CCS7 Additional MTP Layer 3 Events (C7LINK4) provides information related to Common Channel Signaling 7 (CCS7) message transfer part (MTP) layer 3 events.

The following table lists the key and info fields associated with OM group C7LINK4.

Key field	Info field
C7_LINKSET_NUMBER. Number in the range 0 to 254, used as an index into table C7LKSET.	C7LINK_OMINFO. The Info field has a two-part key: CLLI and C7_SIGLINK_CODE. CLLI is the common language location identifier (CLLI) of the linkset that owns the link. The C7_SIGLINK_CODE is a number from 0 to 15 that identifies the link in the linkset.

Related functional groups

Common Channel Signaling 7 (CCS7) is associated with OM group C7LINK4.

Registers

The following table lists the registers associated with OM group C7LINK4 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7LINK4 (Sheet 1 of 2)

Register name	Measures
C7OSMSUD	CCS7 oversize MSU discarded
C7ABUFOC	CCS7 average transmit buffer occupancy
C7PBUFOC	CCS7 peak transmit buffer occupancy
C7ALKODY	CCS7 average link output delay
C7NMALOD	Number of messages used to calculate the average link output delay

Registers for OM group C7LINK4 (Sheet 2 of 2)

Register name	Measures
C7LKFLU	Cumulative duration of signaling link failure—all types
C7LKMTCU	Link maintenance usage
C7HTEACO	Number of hourly thresholds exceeded for automatic changeovers

C7OSMSUD

Register type
Peg

Description
C7OSMSUD counts the number of CCS7 messages discarded because they exceeded the 272-octet message size limit for message signaling units (MSU) on an MTP2 link.

Associated registers
None

Extension registers
None

Associated logs
None

C7ABUFOC

Register type
Peg

Description
C7ABUFOC counts the average occupancy of the link transmit buffer in units of MTP3 messages.

Associated registers
None

Extension registers
None

Associated logs
None

C7PBUFOC

Register type
Peg

Description
C7PBUFOC counts the peak occupancy of the link transmit buffer in units of MTP3 messages.

Associated registers
None

Extension registers
None

Associated logs
None

C7ALKODY

Register type
Peg

Description
C7ALKODY records the average time of a link output delay in units of microseconds.

Associated registers
None

Extension registers
None

Associated logs
None

C7NMALOD

Register type
Peg

Description
C7NMALOD counts the number of messages used to calculate the average link output delay.

Associated registers
None

Extension registers
None

Associated logs
None

C7LKFLU

Register type
Peg

Description
C7LKFLU counts the total time that the signaling link was unavailable to MTP level 3 traffic because of signaling link failures. The total time is counted in units of 10 seconds.

Note: Unlike register C7LKUNAU in OM group C7LINK1, C7LKUNAU tracks the unavailability of a link for all reasons. C7LKFLU tracks only the unavailability of a link caused by link failure.

Associated registers
None

Extension registers
CCS101

Associated logs
None

C7LKMTCU

Register type
Peg

Description
C7LKMTCU counts the total time a link manually was made unavailable to MTP level 3 user part message traffic during the measurement interval. The total time is counted in units of 10 seconds. This includes local or remote management-inhibit, deactivation, or any other manual removal from service.

Associated registers
None

Extension registers
None

Associated logs
None

C7HTEACO

Register type
Peg

Description
C7HTEACO counts the number of times that the automatic changeover hourly threshold is exceeded in a 24-hour period.

Associated registers
None

Extension registers
None

Associated logs
CCS120

C7LKSET

Description

OM group Common Channel Signaling 7 (CCS7) Linkset (C7LKSET) provides information on the performance and use of a CCS7 linkset. The CCS7 affects the performance and use of routesets.

A linkset is a set of synchronized links between any signaling transfer points (STP). A routeset is a set of all routes to a destination in the signaling network. A route is a set of linksets.

The route that a message takes is based on the address and link selector information. The user parts provide the address and link selector in the signaling messages. The system selects a routeset from the signaling routes to a destination. The system selects a linkset and the links in that linkset to route the message.

Routeset management (RSM) determines possible routes for a given routeset and linkset group. The operating company enters a RSM. The RSM examines a route before the RSM routes a message. The RSM checks the traffic capabilities of the route and the linkset for that route. If acceptable routing is available on that route, the RSM selects a link from the linkset. If the first route is not accepted, the RSM examines another route. The RSM repeats this process until the RSM finds an acceptable route, or until the RSM examines all routes.

This group of OMs counts link failures and linkset failures. Failures indicate that the routeset does not transmit messages. The OM group measures the amount of time during which a linkset does not provide calls to a routeset.

The following table lists the key and info fields associated with OM group C7LKSET.

Key field	Info field
C7_LINKSET_NUMBER. Number in the range 0 to 254, used as an index into table C7LKSET.	None

Related functional groups

Common Channel Signaling 7 (CCS7) is associated with OM group C7LKSET.

Registers

The following table lists the registers associated with OM group C7LKSET and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7LKSET

Register name	Measures
C7LSEMRU	CCS7 linkset out, routeset traffic blocked
C7LSFAIL	CCS7 linkset failure
C7LSUNAU	CCS7 linkset unavailable

C7LSEMRU

Register type
Usage

Scan Rate
10 seconds

Description
C7LSEMRU records when or when:

- the linkset does not transmit messages to the routesets
- a minimum of one routeset does not receive message

Associated registers
C7LSUNAU, C7LSMERU

Extension registers
None

Associated logs
None

C7LSFAIL

Register type
Peg

Description
C7LSFAIL counts links that are out of service. If the system removes a link from service, the linkset loses all working links and does not transmit messages to the routesets. When C7LSFAIL counts, an alarm occurs. The register collects data in the central control (CC).

Associated registers
C7LSUNAU

Extension registers
None

Associated logs
None

C7LSUNAU

Register type
Usage

Scan Rate
10 seconds

Description
C7LSUNAU records when the linkset does not transmits messages to the routesets. When the register counts, an alarm occurs because all links on this linkset fail. Some linksets in the routesets of this linkset are available.

Associated registers
C7LSEMRU

Extension registers
None

Associated logs
None

C7LPP

Description

CCS7 Link Peripheral Processor

OM group C7LPP stores link peripheral processor (LPP) information for interframe and intraframe traffic and message size on a Common Channel Signaling 7 (CCS7) link. OM group C7LPP can store message switch (MS), link peripheral processor (LPP), and enhanced LPP (ELPP) information.

An intraframe message has source and destination signaling data links (SDL) in the same frame. An interframe message has different source and destination frames.

OM group C7LPP has a traffic level threshold of 60% to 70% processing capacity for the CCS7 link interface unit (LIU7) and high-speed CCS7 link interface unit (HLIU). C7LPP is turned off when the traffic level exceeds the threshold.

OM group C7LPP is not reported through the Signaling, Engineering, and Administration System (SEAS).

OM group C7LPP provides 32 tuples.

- Key field:
  Controlling entity (MS or LIM)
- Info field:
  Card number for the MS controller or the LIM number for the LIM controller

Key field	Info field
MS (or LIM)	card_number

Related functional groups

Functional group HLIU is associated with OM group C7LPP.

Registers

The following table lists the registers associated with OM group C7LPP and what they measure. For a description of a register, click on the register name.

Registers for OM group C7LPP

Register name	Measures
VALID_FL	Validity of the OM data in table C7LPP
NILREG1	Nil register 1
NILREG2	Nil register 2
NILREG3	Nil register 3
IEH5SRX	Incoming interframe traffic highest percent (5 s/24 h)
IEH5STX	Outgoing interframe traffic highest percent (5 s/24 h)
IAH5SRX	Incoming intraframe traffic highest percent (5 s/24 h)
IAH5STX	Outgoing intraframe traffic highest percent (5 s/24 h)
IEH1TRX	Incoming interframe highest percent (1 transfer period per 24 h)
IEH1TTX	Outgoing interframe traffic highest percent (1 transfer period per 24 h)
IEA1TRX	Incoming interframe traffic accumulated percent (1 transfer period)
IEA1TTX	Outgoing interframe traffic accumulated percent (1 transfer period)
IAH1TRX	Incoming intraframe highest percent (1 transfer period per 24 h)
IAH1TTX	Outgoing intraframe highest percent (1 transfer period per 24 h)
IAA1TRX	Incoming intraframe traffic accumulated percent (1 transfer period)

Registers for OM group C7LPP

Register name	Measures
IAA1TTX	Outgoing intraframe traffic accumulated percent (1 transfer period)
C7L27RX	Percent of incoming traffic MSU length equal to or less than 27 bytes (LIU7)
C7L27TX	Percent of outgoing traffic MSU length equal to or less than 27 bytes (LIU7)
C7L43RX	Percent of incoming traffic MSU length 28 to 43 bytes (LIU7)
C7L43TX	Percent of outgoing traffic MSU length 28 to 43 bytes (LIU7)
C7L74RX	Percent of incoming traffic MSU length 43 to 74 bytes (LIU7)
C7L74TX	Percent of outgoing traffic MSU length 43 to 74 bytes (LIU7)
C7L75RX	Percent of incoming traffic MSU length of greater than or equal to 75 bytes (LIU7)
C7L75TX	Percent of outgoing traffic MSU length greater than or equal to 75 bytes (LIU7)
C7H1CRX	Percent of incoming traffic MSU length less than or equal to one asynchronous transfer mode (ATM) cell (HLIU)
C7H1CTX	Percent of outgoing traffic MSU length less than or equal to 1 ATM cell (HLIU)
C7H2CRX	Percent of incoming traffic MSU length 1 to 2 ATM cells (HLIU)
C7H2CTX	Percent of outgoing traffic MSU length 1 to 2 ATM cells (HLIU)
C7H3CRX	Percent of incoming traffic MSU length 2 to 3 ATM cells (HLIU)

Registers for OM group C7LPP

Register name	Measures
C7H3CTX	Percent of outgoing traffic MSU length 2 to 3 ATM cells (HLIU)
C7H4CRX	Percent of incoming traffic MSU length greater than 3 ATM cells (HLIU)
C7H4CTX	Percent of outgoing traffic MSU length greater than 3 ATM cells (HLIU)

VALID_FL

Register type
Peg

Description
Validity of the OM data in table C7LPP

Register VALID_FL indicates the validity of all registers in group C7LPP.

Associated registers
All other registers in OM group C7LPP are associated with register VALID_FL. Register VALID_FL indicates the validity of each register. The validation formula is 0 for invalid or 1 for valid.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

NILREG1

Register type
Nil

Description
Nil register 1

Register NILREG1 is a filler to align registers in OM group C7LPP.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

NILREG2

Register type
Nil

Description
Nil register 2

Register NILREG2 is a filler to align registers in OM group C7LPP.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

NILREG3

Register type
Nil

Description
Nil register 3

Register NILREG3 is a filler to align registers in OM group C7LPP.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IEH5SRX

Register type
Usage

Description
Incoming interframe traffic highest percent (5 s/24 h)

Register IEH5SRX stores the highest percentage of 5-s incoming interframe traffic within 24 h.

Associated registers
VALID_FL indicates the validity of register IEH5SRX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IEH5STX

Register type
Usage

Description
Outgoing interframe traffic highest percent (5 s/24 h)

Register IEH5STX stores the highest percentage of 5-s outgoing interframe traffic within 24 h.

Associated registers
VALID_FL indicates the validity of register IEH5STX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IAH5SRX

Register type
Usage

Description
Incoming intraframe traffic highest percent (5 s/24 h) Register IAH5SRX stores the highest percentage of 5-s incoming intraframe traffic within 24 h.

Associated registers
VALID_FL indicates the validity of register IAH5SRX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IAH5STX

Register type
Usage

Description
Outgoing intraframe traffic highest percent (5 s/24 h)

Register IAH5STX stores the highest percentage of 5-s outgoing intraframe traffic within 24 h.

Associated registers
VALID_FL indicates the validity of register IAH5STX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IEH1TRX

Register type
Usage

Description
Incoming interframe highest percent (1 transfer period per 24 h)

Register IEH1TRX stores the highest percentage of the incoming interframe traffic for one transfer period within 24 h.

Associated registers
VALID_FL indicates the validity of register IEH1TRX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IEH1TTX

Register type
Usage

Description
Outgoing interframe traffic highest percent (1 transfer period per 24 h)

Register IEH1TTX stores the highest percentage of the outgoing interframe traffic for one transfer period within 24 h.

Associated registers
VALID_FL indicates the validity of register IEH1TTX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IEA1TRX

Register type
Usage

Description
Incoming interframe traffic accumulated percent (1 transfer period)

Register IEA1TRX stores the accumulated percentage of incoming interframe traffic for one transfer period.

Associated registers
VALID_FL indicates the validity of register IEA1TRX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IEA1TTX

Register type
Usage

Description
Outgoing interframe traffic accumulated percent (1 transfer period) Register IEA1TTX stores the accumulated percentage of outgoing interframe traffic for one transfer period.

Associated registers
VALID_FL indicates the validity of register IEA1TTX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IAH1TRX

Register type
Usage

Description
Incoming intraframe highest percent (1 transfer period per 24 h)

Register IAH1TRX stores the highest percentage of incoming intraframe traffic in one transfer period within 24 h.

Associated registers
VALID_FL indicates the validity of register IAH1TRX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IAH1TTX

Register type
Usage

Description
Outgoing intraframe highest percent (1 transfer period per 24 h)

Register IAH1TTX stores the highest percentage of outgoing intraframe traffic in one transfer period within 24 h.

Associated registers
VALID_FL indicates the validity of register IAH1TTX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IAA1TRX

Register type
Usage

Description
Incoming intraframe traffic accumulated percent (1 transfer period)

Register IAA1TRX stores the accumulated percentage of incoming intraframe traffic in one transfer period.

Associated registers
VALID_FL indicates the validity of register IAA1TRX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IAA1TTX

Register type
Usage

Description
Outgoing intraframe traffic accumulated percent (1 transfer period)

Register IAA1TTX stores the accumulated percentage of outgoing intraframe traffic in one transfer period.

Associated registers
VALID_FL indicates the validity of register IAA1TTX. The validation formula range is 0 to 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7L27RX

Register type
Usage

Description
Percent of incoming traffic MSU length equal to or less than 27 bytes (LIU7)

Register C7L27RX stores the total percentage of incoming LIU7 traffic transmitted through a frame in one transfer period. The traffic has a message transfer part (MTP) layer 2 message length of less than or equal to 27 bytes.

Associated registers
VALID_FL indicates the validity of register C7L27RX. The validation formula follows:

C7L27RX + C7L43RX + C7L74RX + C7L75RX = 100 or 0

C7L27TX + C7L43TX + C7L74TX +C7L75TX = 100 or 0

Note: If the frame does not have an LIU7, the sum is 0. If the frame has an LIU7, the sum is 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7L27TX

Register type
Usage

Description
Percent of outgoing traffic MSU length equal to or less than 27 bytes (LIU7)

Register C7L27TX stores the total percent of outgoing LIU7 traffic transmitted through a frame in one transfer period. The traffic has an MTP layer 2 message length of less than or equal to 27 bytes.

Associated registers
VALID_FL indicates the validity of register C7L27TX. The validation formula range follows:

C7L27RX + C7L43RX + C7L74RX + C7L75RX = 100 or 0

C7L27TX + C7L43TX + C7L74TX +C7L75TX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7L43RX

Register type
Usage

Description
Percent of incoming traffic MSU length 28 to 43 bytes (LIU7)

Register C7L43RX stores the total percent of incoming LIU7 traffic transmitted through a frame in one transfer period. The traffic has an MTP layer 2 message length of greater than or equal to 28 bytes and less than or equal to 43 bytes.

Associated registers
VALID_FL indicates the validity of register C7L43RX. The validation formula range follows:

C7L27RX + C7L43RX + C7L74RX + C7L75RX = 100 or 0

C7L27TX + C7L43TX + C7L74TX +C7L75TX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7L43TX

Register type
Usage

Description
Percent of outgoing traffic MSU length 28 to 43 bytes (LIU7)

Register C7L43TX stores the total percent of outgoing LIU7 traffic transmitted through a frame in one transfer period. The traffic has an MTP layer 2 message length of greater than or equal to 28 bytes and less than or equal to 43 bytes.

Associated registers
VALID_FL indicates the validity of register C7L43TX. The validation formula range follows:

C7L27RX + C7L43RX + C7L74RX + C7L75RX = 100 or 0

C7L27TX + C7L43TX + C7L74TX +C7L75TX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7L74RX

Register type
Usage

Description
Percent of incoming traffic MSU length 43 to 74 bytes (LIU7)

Register C7L74RX stores the total percent of incoming LIU7 traffic transmitted through a frame in one transfer period. The traffic has an MTP layer 2 message length of greater or equal to 43 bytes and less than or equal to 74 bytes.

Associated registers
VALID_FL indicates the validity of register C7L74RX. The validation formula follows:

C7L27RX + C7L43RX + C7L74RX + C7L75RX = 100 or 0

C7L27TX + C7L43TX + C7L74TX +C7L75TX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7L74TX

Register type
Usage

Description
Percent of outgoing traffic MSU length 43 to 74 bytes (LIU7)

Register C7L74TX stores the total percent of outgoing LIU7 traffic transmitted through a frame in one transfer period. The traffic has an MTP layer 2 message length of greater or equal to 43 bytes and less than or equal to 74 bytes.

Associated registers
VALID_FL indicates the validity of register C7L74TX. The validation formula range follows:

C7L27RX + C7L43RX + C7L74RX + C7L75RX = 100 or 0

C7L27TX + C7L43TX + C7L74TX +C7L75TX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7L75RX

Register type
Usage

Description
Percent of incoming traffic MSU length of greater than or equal to 75 bytes (LIU7)

Register C7L75RX stores the total percent of incoming LIU7 traffic transmitted through a frame in one transfer period. The traffic has an MTP layer 2 message length of greater or equal to 75 bytes.

Associated registers
VALID_FL indicates the validity of register C7L75RX. The validation formula range follows:

C7L27RX + C7L43RX + C7L74RX + C7L75RX = 100 or 0

C7L27TX + C7L43TX + C7L74TX +C7L75TX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7L75TX

Register type
Usage

Description
Percent of outgoing traffic MSU length greater than or equal to 75 bytes (LIU7)

Register C7L75TX stores the total percent of outgoing LIU7 traffic transmitted through a frame in one transfer period. The traffic has an MTP layer 2 message length of greater or equal to 75 bytes.

Associated registers
VALID_FL indicates the validity of register C7L75TX. The validation formula follows:

C7L27RX + C7L43RX + C7L74RX + C7L75RX = 100 or 0

C7L27TX + C7L43TX + C7L74TX +C7L75TX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7H1CRX

Register type
Usage

Description
Percent of incoming traffic MSU length less than or equal to one asynchronous transfer mode (ATM) cell (HLIU)

Register C7H1CRX stores the total percent of incoming HLIU traffic transmitted through a frame in one transfer period. The traffic has a message length of less than or equal to one asynchronous transfer mode (ATM) cell.

Associated registers
VALID_FL indicates the validity of register C7H1CRX. The validation formula follows:

C7H1CRX + C7H2CRX + C7H3CRX + C7H4CRX = 100 or 0

C7H1CTX + C7H2CTX + C7H3CTX + C7H4CTX = 100 or 0

Note: If the frame does not have an LIU7, the sum is 0. If the frame has an LIU7, the sum is 100.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7H1CTX

Register type
Usage

Description
Percent of outgoing traffic MSU length less than or equal to 1 ATM cell (HLIU)

Register C7H1CTX stores the total percentage of outgoing HLIU traffic through a frame in one transfer period. The traffic has a message length of less than or equal to one ATM cell.

Associated registers
VALID_FL indicates the validity of register C7H1CTX. The validation formula follows:

C7H1CRX + C7H2CRX + C7H3CRX + C7H4CRX = 100 or 0

C7H1CTX + C7H2CTX + C7H3CTX + C7H4CTX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7H2CRX

Register type
Usage

Description
Percent of incoming traffic MSU length 1 to 2 ATM cells (HLIU)

Register C7H2CRX stores the total percent of incoming HLIU traffic transmitted through a frame in one transfer period. The traffic has a message length of greater than one ATM cell and less than or equal to two ATM cells.

Associated registers
VALID_FL indicates the validity of register C7H2CRX. The validation formula follows:

C7H1CRX + C7H2CRX + C7H3CRX + C7H4CRX = 100 or 0

C7H1CTX + C7H2CTX + C7H3CTX + C7H4CTX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7H2CTX

Register type
Usage

Description
Percent of outgoing traffic MSU length 1 to 2 ATM cells (HLIU)

Register C7H2CTX stores the total percent of outgoing HLIU traffic transmitted through a frame in one transfer period. The traffic has a message length of greater than one ATM cell and less than or equal to two ATM cells.

Associated registers
VALID_FL indicates the validity of register C7H2CTX. The validation formula range follows:

C7H1CRX + C7H2CRX + C7H3CRX + C7H4CRX = 100 or 0

C7H1CTX + C7H2CTX + C7H3CTX + C7H4CTX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7H3CRX

Register type
Usage

Description
Percent of incoming traffic MSU length 2 to 3 ATM cells (HLIU)

Register C7H3CRX stores the total percent of incoming HLIU traffic transmitted through a frame in one transfer period. The traffic has a message length of greater than two ATM cells and less than or equal to three ATM cells.

Associated registers
VALID_FL indicates the validity of register C7H3CRX. The validation formula range follows:

C7H1CRX + C7H2CRX + C7H3CRX + C7H4CRX = 100 or 0

C7H1CTX + C7H2CTX + C7H3CTX + C7H4CTX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7H3CTX

Register type
Usage

Description
Percent of outgoing traffic MSU length 2 to 3 ATM cells (HLIU)

Register C7H3CTX stores the total percent of outgoing HLIU traffic transmitted through a frame in one transfer period. The traffic has a message length of greater than two ATM cells and less than or equal to three ATM cells.

Associated registers
VALID_FL indicates the validity of register C7H3CTX. The validation formula range follows:

C7H1CRX + C7H2CRX + C7H3CRX + C7H4CRX = 100 or 0

C7H1CTX + C7H2CTX + C7H3CTX + C7H4CTX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7H4CRX

Register type
Usage

Description
Percent of incoming traffic MSU length greater than 3 ATM cells (HLIU)

Register C7H4CRX stores the total percent of incoming HLIU traffic transmitted through a frame in one transfer period. The traffic has a message length of greater than three ATM cells.

Associated registers
VALID_FL indicates the validity of register C7H4CRX. The validation formula range follows:

C7H1CRX + C7H2CRX + C7H3CRX + C7H4CRX = 100 or 0

C7H1CTX + C7H2CTX + C7H3CTX + C7H4CTX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7H4CTX

Register type
Usage

Description
Percent of outgoing traffic MSU length greater than 3 ATM cells (HLIU)

Register C7H4CTX stores the total percent of incoming HLIU traffic transmitted through a frame in one transfer period. The traffic has a message length of greater than three ATM cells.

Associated registers
VALID_FL indicates the validity of register C7H4CTX. The validation formula range follows:

C7H1CRX + C7H2CRX + C7H3CRX + C7H4CRX = 100 or 0

C7H1CTX + C7H2CTX + C7H3CTX + C7H4CTX = 100 or 0

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7LPP2

Description

OM group Common Channel Signaling 7 (CCS7) Link Peripheral Processor 2 (C7LPP2) stores link peripheral processor (LPP) information related to message type on CCS7 links.

C7LPP2 has a traffic level threshold of 60% to 70% processing capacity for both the CCS7 link interface unit (LIU7) and high-speed CCS7 link interface unit (HLIU). C7LPP2 is turned off when the traffic level exceeds the threshold.

OM group C7LPP2 is not reported through the Signaling, Engineering, and Administration System (SEAS).

The following table lists the key and info fields associated with OM group C7LPP2.

Key field	Info field
Controlling entity (MS or LIM)	Card number for the MS controller or the LIM number for the LIM controller

Related functional groups

HLIU is associated with OM group C7LPP2.

Registers

The following table lists the registers associated with OM group C7LPP2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7LPP2 (Sheet 1 of 2)

Register name	Measures
VALIDFL2	Validity of OM data in table C7LPP2
LPP2NIL1	LPP nil register 1 for OM group C7LPP2
LP2NIL2	LPP nil register 2 for OM group C7LPP2
LPP2NIL3	LPP nil register 3 for OM group C7LPP2
LPPSCRX	Incoming SCCP accumulated traffic

Registers for OM group C7LPP2 (Sheet 2 of 2)

Register name	Measures
LPPSCTX	Outgoing SCCP accumulated traffic
LPPUPRX	Incoming user part accumulated traffic
LPPUPTX	Outgoing user part accumulated traffic
LPMTPRX	Incoming MTP accumulated traffic
LPMTPTX	Outgoing MTP accumulated traffic

VALIDFL2

Register type
Peg

Description
VALIDFL2 indicates the validity of all registers within OM group C7LPP2.

Associated registers
All registers in table C7LPP2 are associated with register VALIDFL2. VALIDFL2 indicates the validity of each register. The validation formula is 0 for invalid or 1 for valid.

Extension registers
None

Associated logs
None

LPP2NIL1

Register type
Peg

Description
LPP2NIL1 is a filler to align registers in OM group C7LPP2.

Associated registers
None

Extension registers
None

Associated logs
None

LP2NIL2

Register type
Peg

Description
LP2NIL2 is a filler to align registers in OM group C7LPP2.

Associated registers
None

Extension registers
None

Associated logs
None

LPP2NIL3

Register type
Peg

Description
LPP2NIL3 is a filler to align registers in OM group C7LPP2.

Associated registers
None

Extension registers
None

Associated logs
None

LPPSCRX

Register type
Peg

Description
LPPSCRX stores the number of incoming signaling connection control part (SCCP) messages transmitted through a frame in one transfer period. If the register is longer than the size of the integer, the data is stored in extension register LPPSCRX2.

Associated registers
VALIDFL2

Extension registers
LPPSCRX2

Associated logs
None

LPPSCTX

Register type
Peg

Description
LPPSCTX stores the number of outgoing SCCP messages transmitted through a frame in one transfer period. If the register is longer than the size of the integer, the data is stored in extension register LPPSCTX2.

Associated registers
VALIDFL2

Extension registers
LPPSCTX2

Associated logs
None

LPPUPRX

Register type
Peg

Description
LPPSCTX stores the number of outgoing SCCP messages transmitted through a frame in one transfer period. If the register is longer than the size of the integer, the data is stored in extension register LPPSCTX2.

Associated registers
VALIDFL2

Extension registers
LPPUPRX2

Associated logs
None

LPPUPTX

Register type
Peg

Description
LPPUPTX stores the number of outgoing user part messages transmitted through a frame in one transfer period. If the register is longer than the size of the integer, the data is stored in extension register LPPUPTX2.

Associated registers
VALIDFL2

Extension registers
LPPUPTX2

Associated logs
None

LPMTPRX

Register type
Peg

Description
LPMTPRX stores the number of incoming signaling network management (SNM) messages transmitted through a frame in one transfer period. If the register is longer than the size of the integer, the data is stored in extension register LPMTPRX2.

Associated registers
VALIDFL2

Extension registers
LPMTPRX2

Associated logs
None

LPMTPTX

Register type
Peg

Description
LPMTPTX stores the number of outgoing SNM messages transmitted through a frame in one transfer period. If the register is longer than the size of the integer, the data is stored in extension register LPMTPTX2.

Associated registers
VALIDFL2

Extension registers
LPMTPTX2

Associated logs
None

C7MTP

Description

OM group Common Channel Signaling 7 (CCS7) Message Transfer Part (C7MTP) counts message signal units (MSU) that a CCS7 message transfer part (MTP) discards. C7MTP is part of a signal transfer point (STP). Two registers count discarded MSUs. The system discards MSUs because the system cannot determine the type of message. The system also discards MSUs because the destination point code is not in the routing tables for that office.

Use OM group C7MTP in the Signaling Engineering Administration System (SEAS) for CCS7 offices. Data in the C7MTP transfers to the signaling engineering administration controller (SEAC) for use in SEAS. For the SEAC to collect the correct data, Table OMACC defines three classes. Table OMACC must define three classes to accumulate the required 30-minute, 60-minute and 24-hour collection periods.

The following table lists the key and info fields associated with OM group C7MTP.

Key field	Info field
None	None

The following describes how to modify tables OFCOPT and OFCENG. The SEAC requires 5-minute reports.

The SEAC OM collection requires the following table modifications:

- Add SEAS_30M, SEAS_60M, and SEAS_24H to table OMACC.
- Add group C7MTP and fields C7MSIDPC and C7MSISIO to each of the three classes.
- Set OMXFR to X15 in table OFCENG.
- Set OMHISTORYON to Y in table OFCOPT.

Related functional groups

The following functional groups are associated with OM group C7MTP:

- Signaling Engineering Administration System (SEAS)
- Signaling engineering administration controller (SEAC)
- CCS7
- Signal Transfer Point (STP)

Registers

The following table lists the registers associated with OM group C7MTP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7MTP

Register name	Measures
C7GTT95	Number of 95th percentile tests that failed for MSUs that require global title translation
C7MSIDPC	CCS7 MSU invalid destination point code
C7MSISIO	CCS7 MSU invalid service information octet
C7NGTT95	Number of 95th percentile tests that failed for MSUs that do not require global title translation
CYPHDYNT	Average processor handling delay for MSUs that require global title translation
C7PHDYWT	Average processor handling delay for MSUs that require global title translation
C7SMPNT1	Number of MSUs sampled for cross-STP and processor handling delay measurements that did not require global title translation
C7SMPWT1	Number of MSUs sampled for cross-STP and processor handling delay measurements that require global title translation
C7XSDYNT	Average cross-STP delay for MSUs that do not require global title translation
C7XSDYWT	Average cross-STP delay for MSUs that require global title translation

C7GTT95

Register type
Peg

Description
C7GTT95 counts the number of MSUs sampled that have processing handling delays. These delays are above the 95th-percentile requirement for MSUs that have GTT.

The processing handling delay is the interval that starts when the STP receives the last bit of a message from the incoming signaling link. The interval ends when the message reaches the output signaling link control buffer.

Associated registers
None

Extension registers
None

Associated logs
None

C7MSIDPC

Register type
Peg

Description
C7MSIDPC counts MSUs that the system discards at an STP. The system discards MSUs because the destination point code (DPC) is not in the datafill of the routing tables for the node.

Associated registers
MSINVDPC in SEAS

Extension registers
None

Associated logs
None

C7MSISIO

Register type
Peg

Description
C7MSISIO counts MSUs that the system discards at an STP. The system discards MSUs because the service information octet (SIO) cannot determine the type of message.

Associated registers
MSINVSIO in SEAS

Extension registers
None

Associated logs
None

C7NGTT95

Register type
Peg

Description
C7NGTT95 counts the number of MSUs sampled that have processing handling delays. These delays are above the 95th-percentile requirement for MSUs that do not have GTT.

Associated registers
None

Extension registers
None

Associated logs
None

CYPHDYNT

Register type
Peg

Description
C7PHDYNT records the average processing handling delay for MSUs that do not require global title translation (GTT). The MSU sampling rate is once every 10 seconds. The register reports the average processing handling delay in milliseconds.

Associated registers
None

Extension registers
None

Associated logs
None

C7PHDYWT

Register type
Peg

Description
C7PHDYWT records the average processing handling delay for MSUs that require GTT. The MSU sampling rate is one time every 10 seconds. The register reports the average processing handling delay in milliseconds.

Associated registers
None

Extension registers
None

Associated logs
None

C7SMPNT1

Register type
Peg

Description
C7SMPNT1 records the number of MSUs sampled for cross-STP and processor handling delay measurements. These sampled MSUs do not have GTT.

Cross-STP delay is the interval that starts when the STP receives the last bit of a message. The STP receives this message from the incoming signaling link. The interval ends when the STP transmits the last bit of the message on the outgoing signaling link.

Associated registers
None

Extension registers
C7SMPNT2

Associated logs
None

C7SMPWT1

Register type
Peg

Description
C7SMPWT1 records the number of MSUs sampled for average cross-STP and processor handling delay measurements. These sampled MSUs have GTT.

Associated registers
None

Extension registers
C7SMPWT2

Associated logs
None

C7XSDYNT

Register type
Peg

Description
C7XSDYNT records the average cross-STP delay for MSUs that do not have GTT. The MSU sampling rate is one time every 10 seconds. The register reports the average cross-STP delay in milliseconds.

Associated registers
None

Extension registers
None

Associated logs
None

C7XSDYWT

Register type
Peg

Description
C7XSDYWT records the average cross-STP delay for MSUs that have GTT. The MSU sampling rate is one time every 10 seconds. The register reports average cross-STP delay in milliseconds.

Associated registers
None

Extension registers
None

Associated logs
None

C7MTPRES

Description

OM group Common Channel Signaling 7 (CCS7) Message Transfer Part (MTP) Restart (C7MTPRES) counts the number of MTP restart procedures initiated in the previous hour. C7MTPRES register counts MTP restarts for the following procedures:

- partial restart
- full restart
- adjacent restart
- unexpected traffic restart message (TRM)

The following table lists the key and info fields associated with OM group C7MTPRES.

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with OM group C7MTPRES:

- Common Channel Signaling 7 (CCS7)
- Signaling Transfer Point (STP)
- Service Switching Point (STP)

Registers

The following table lists the registers associated with OM group C7MTPRES and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7MTPRES

Register name	Measures
RESADJCT	Restart adjacent count
RESFULCT	Restart full count
RESPARCT	Restart partial count
RESUNXCT	Restart unexpected TRM count

RESADJCT

Register type
Peg

Description
RESADJCT counts the number of adjacent restarts that the system initiated in the last hour.

Associated registers
None

Extension registers
None

Associated logs
CCS145

RESFULCT

Register type
Peg

Description
RESFULCT counts the number of full restarts that the system initiated in the last hour.

Associated registers
None

Extension registers
None

Associated logs
CCS145

RESPARCT

Register type
Peg

Description
RESPARCT counts the number of partial restarts that the system initiated in the last hour.

Associated registers
None

Extension registers
None

Associated logs
CCS145

RESUNXCT

Register type
Peg

Description
RESUNXCT counts the number of unexpected TRM restarts that the system initiated in the last hour.

Associated registers
None

Extension registers
None

Associated logs
CCS145

C7ROUTE

Description

CCS7 route (C7ROUTE)

The OM group C7ROUTE describes the performance and use of Common Channel Signaling 7 (CCS7) routes.

Message routing is based on the address and link selector information that signaling messages provide. This information sets out a routeset. The routeset describes all the signaling paths or routes, linksets, and links in the linkset. The system uses these paths and links to route this message to a destination.

Routeset management determines how stable a route is to transmit messages. If acceptable routing is available, the system selects an in-service link from the linkset. If the route not acceptable, the system examines other routes. The system examines other routes until the system finds an in-service link, or until the system cannot finds other routes.

Each route in a routeset has a transfer state that describes the ability of the signaling network to carry messages to the destination. The following transfer states occur:

- transfer allowed (TFA), routing is available
- transfer prohibited (TFP), routing is not available
- transfer restricted (TFR), routing is available at a lower level of service

Note: The Japan Public Network (JPN) only handles TFA and TFP messages. The JPN does not accept TFR messages.

The TFA, TFP, and TFR are the result of forced rerouting or controlled rerouting. When a route to a destination fails, the system reroutes a message to another available route. An indication that a route failed arrives from the remote signaling transfer point of a linkset as a TFP signal. This procedure is forced rerouting. The system determines another route and diverts traffic to that route.

When the system restores a route, messages return to that route from the other route. This procedure is controlled rerouting. An indication of a restored route arrives from the remote signaling transfer point as a TFA signal. The system performs controlled rerouting when a route is restricted because of a lower level of service. A TFR indicates this

condition. Controlled rerouting buffers the following traffic into buffers that are not permanent. The system determines other routes. Traffic clears out of the old route. The system sends the buffered traffic to the new route.

Remote congestion information is also received over a route. The system informs the user parts of the congestion level. Transfer controlled (TFC) messages on separate routes report remote congestion. Congestion on one route in a routeset indicates congestion on all routes. An indication of this congestion occurs because the system distributes traffic between signaling transfer points (STP). To alleviate route congestion, the system sends a routeset congestion (RSC) test message on one of the routes. This message has a priority of one less than the remote congestion value. If this message does not generate another TFC from a remote location, the system assumes that congestion decreased.

The OM group C7ROUTE reports for the common channel signalling routes. These routes associate with the first 1024 routesets in the C7RTESET table. The OM group C7ROUTE2 reports the last 1023 routesets.

Note: The Japan public network (JPN) uses a different procedure to clear route congestion than the procedure in the preceding paragraph. The JPN does not send RSC test messages. When the JPN receives route congestion information in a TFC message, the system sets a timer. After 90 s the congestion condition clears automatically.

The OM group C7ROUTE provides one tuple for each key.

- C7_ROUTESET-NUMBER,
  a number in the range 0 to 1024. This number is an index in table C7RTESET
- Info field:
  C7ROUTE_OMINFO

Key field	Info field
C7_ROUTESET-NUMBER	C7ROUTE_OMINFO

Related functional groups

There are no associated functional groups.

Registers

The following table lists the registers associated with OM group C7ROUTE and what they measure. For a description of a register, click on the register name.

Registers for OM group C7ROUTE

Register name	Measures
C7CNTRER	CCS7 controlled rerouting (C7CNTRER)
C7FRCRER	CCS7 forced rerouting (C7FRCRER)
C7RTUNAU	CCS7 route unavailable (C7RTUNAU)
C7TFA	CCS7 transfer allowed (C7TFA)
C7TFCO	CCS7 transfer controlled level 0 (zero) (C7TFC0)
C7TFC1	CCS7 transfer controlled level 1 (C7TFC1)
C7TFC2	CCS7 transfer controlled level 2 (C7TFC2)
C7TFC3	CCS7 transfer controlled level 3 (C7TFC3)
C7TFP	CCS7 transfer prohibited (C7TFP)
C7TFR	CCS7 transfer restricted (C7TFR)
C7XTFA	CCS7 exception-list transfer allowed (C7XTFA)
C7XTFP	CCS7 exception-list transfer prohibited (C7XTFP)
C7XTFR	CCS7 exception-list transfer restricted (C7XTFR)

C7CNTRER

Register type
Peg

Description
CCS7 controlled rerouting (C7CNTRER)

Register C7CNTRER counts controlled rerouting procedures for a route. Controlled rerouting indicates that a route from which the system

diverts traffic has traffic restored. The system diverted messages to this route. This register is counted in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7FRCRER

Register type
Peg

Description
Register C7FRCRER counts forced rerouting procedures undertaken for a route.

When a route to a destination fails, the system reroutes messages to alternate available routes. A transfer prohibited status (TFP) message arrives to indicate a failed route. The route is not available to transmit messages. An alarm occurs at the routeset level.

This register is counted in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7RTUNAU

Register type
Peg

Description
CCS7 route unavailable (C7RTUNAU)

Register C7RTUNAU is a usage register. The system scans the route every 10 s, and C7RTUNAU records if the route transmits messages. If

one of the routes of the routeset is not able to deliver messages, an alarm occurs.

Register increases in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

C7TFA

Register type
Peg

Description
CCS7 transfer allowed (C7TFA)

Register C7TFA counts transfer allowed (TFA) status messages received for a route.

A TFA message indicates that the CCS7 network has a good grade of service for the specified route. One destination point code (DPC) in the routing label specifies this route.

The register is counted in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS166 when a CCS7 route receives the TFA signal from the network.

C7TFCO

Register type
Peg

Description
CCS7 transfer controlled level 0 (zero) (C7TFC0)

Register C7TFC0 counts transfer controlled level 0 (zero) congestion status messages received for a specified route. This message indicates that congestion on the route is not present.

This register is counted in central control (CC).

Associated registers
Register C7TFC1 counts transfer controlled level 1 congestion status messages received for a route.

Register C7TFC2 counts transfer controlled level 2 congestion status messages received for a route.

Register C7TFC3 counts transfer controlled level 3 congestion status messages received for a route.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS172 when the system receives a transfer controlled signal. An increase or a decrease in the congestion level of a routeset can cause the system to generate CCS172.

C7TFC1

Register type
Peg

Description
CCS7 transfer controlled level 1 (C7TFC1)

Register C7TFC1 counts transfer controlled level 1 congestion status messages received for a specified route. This message indicates that route congestion reaches the threshold set for level 1. User parts stop the transmission of messages of priority 0 (zero). A routeset major alarm occurs.

This register is counted in central control (CC).

Associated registers
Register C7TFC0 counts transfer controlled level 0 (zero) congestion status messages received for a route.

Register C7TFC2 counts transfer controlled level 2 congestion status messages received for a route.

Register C7TFC3 counts transfer controlled level 3 congestion status messages received for a route.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS172 when the system receives a transfer controlled signal. An increase or a decrease in the congestion level of a routeset can cause the system to generate CCS172.

C7TFC2

Register type
Peg

Description
CCS7 transfer controlled level 2 (C7TFC2)

Register C7TFC2 counts transfer controlled level 2 congestion status messages received for a specified route. This message indicates that route congestion reaches the threshold set for level 2. User parts stop the transmission of messages of priority 0 (zero) and 1. A routeset major alarm occurs.

This register is counted in central control (CC).

Associated registers
Register C7TFC0 counts transfer controlled level 0 (zero) congestion status messages received for a route.

Register C7TFC1 counts transfer controlled level 1 congestion messages received for this route.

Register C7TFC3 counts transfer controlled level 3 congestion status messages received for this route.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS172 when the system receives a transfer controlled signal. An increase or a decrease in the congestion level of a routeset can cause the system to generate CCS172.

C7TFC3

Register type
Peg

Description
CCS7 transfer controlled level 3 (C7TFC3)

Register C7TFC3 counts transfer controlled level 3 congestion status messages received for a specified route. This message indicates that route congestion reached the threshold set for level 3. User parts stop the transmission of messages of priority 0 (zero), 1, and 2. A routeset major alarm occurs.

This register is counted in central control (CC).

Associated registers
The C7TFC0 counts transfer controlled level 0 (zero) congestion status messages received for a route.

Register C7TFC1 counts transfer controlled level 1 congestion status messages received for a route.

Register C7TFC2 counts transfer controlled level 2 congestion status messages received for a route.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS173 when the transmission buffer of a CCS7 link congests.

C7TFP

Register type
Peg

Description
CCS7 transfer prohibited (C7TFP)

Register C7TFP counts transfer prohibited (TFP) status messages received for a route. This message indicates that the CCS7 network cannot deliver messages on this route to the destination point code (DPC). The routing label specifies the DPC. A routeset alarm occurs.

This register is counted in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS168 when a CCS7 route receives the transfer prohibited signal from the network.

C7TFR

Register type
Peg

Description
CCS7 transfer restricted (C7TFR)

Register C7TFR counts transfer restricted status messages received for a route. This message indicates that the CCS7 network offers degraded service for the route. The system delivers message, but not as quickly as normal. A major alarm occurs.

This register is counted in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS167 when a CCS7 route receives the transfer restricted signal from the network.

C7XTFA

Register type
Peg

Description
CCS7 exception-list transfer allowed (C7XTFA)

Register C7XTFA counts the number of transfer-allowed (TFA) messages received for partial-point-code routes. This register increases if enhanced cluster routing (ECR) is active.

A TFA message indicates that the CCS7 network has a satisfactory grade of service for this specified route. One destination point code (DPC) in the routing label specifies this route.

The register is counted in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS180 when a CCS7 partial-point-code route receives the TFA signal from the network.

C7XTFP

Register type
Peg

Description
CCS7 exception-list transfer prohibited (C7XTFP)

Register C7XTFP counts the number of transfer-prohibited (TFP) messages received for partial-point-code routes. This message indicates that the CCS7 network cannot deliver messages on this route to the destination point code (DPC). The routing label specifies the DPC. A routeset alarm occurs.

This register is counted in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS182 when a CCS7 partial-point-code route receives the transfer prohibited signal from the network.

C7XTFR

Register type
Peg

Description
CCS7 exception-list transfer restricted (C7XTFR)

Register C7XTFR counts the number of transfer-restricted messages received for partial-point-code routes. This message indicates that the CCS7 network offers degraded service for the route. The system delivers messages but not as quickly as normal. A major alarm occurs.

This register is counted in central control (CC).

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates CCS181 when a CCS7 partial-point-code route receives the transfer restricted signal from the network.

C7ROUTE2

Description

OM group Common Channel Signaling 7 (CCS7) Route (C7ROUTE2) describes the performance and use of CCS7 routes. Refer to OM group C7ROUTE for details of message routing.

C7ROUTE2 provides reports on half of the common channel signaling routes. These routes associate with the last 1023 routesets in table C7RTESET at a service switching point (SSP) office. C7ROUTE2 only applies to offices that require entries for more than 1023 routesets.

The following table lists the key and info fields associated with OM group C7ROUTE2:

Key field	Info field
This field contains the routeset name	This field contains the route number within the routeset. The number of tuples: 6138

Related functional groups

CCS7 is associated with OM group C7ROUTE2.

Registers

The following table lists the registers associated with OM group C7ROUTE2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7ROUTE2 (Sheet 1 of 2)

Register name	Measures
C72CNTRE	CCS7 transfer controlled rerouting
C72FRCRE	CCS7 transfer controlled rerouting
C72RTUNU	CCS7 route not available
C72TFA	CCS7 transfer allowed
C72TFC0	CCS7 transfer controlled level 0
C72TFC1	CCS7 transfer controlled level 1

Registers for OM group C7ROUTE2 (Sheet 2 of 2)

Register name	Measures
C72TFC2	CCS7 transfer controlled level 2
C72TFC3	CCS7 transfer controlled level 3
C72TFP	CCS7 transfer prohibited
C72TFR	CCS7 transfer restricted
C72XTFA	CCS7 transfer allowed for a partial-point-code (PPC) route
C72XTFP	CCS7 transfer prohibited for PPC route
C72XTFR	CCS7 exception-list transfer restricted

C72CNTRE

Register type
Peg

Description
C72CNTRE counts controlled rerouting procedures for a route. Controlled rerouting indicates that a route had traffic diverted. With the route restored, messages return to this route. C72CNTRE is counted in computing module (CM).

Associated registers
C7CNTRER

Extension registers
None

Associated logs
None

C72FRCRE

Register type
Peg

Description
C72FRCRE counts the forced rerouted procedures performed for a route. When a route to a destination fails, the system diverts messages to other available routes.

The indication of a failed route arrives as a transfer prohibited status (TFP) message. The route is not available to transmit messages. Either a major or a critical alarm occurs at the routeset level. C72FRCRE is counted in the computing module CM.

Associated registers
C7FRCRER

Extension registers
None

Associated logs
None

C72RTUNU

Register type
Usage

Scan rate
10 seconds

Description
C72RTUNU records if the route can transmit messages at this time. Either a major or a critical alarm occurs if the routeset can not deliver messages. C72RTUNU increases in the CM.

Associated registers
C7RTUNAU

Extension registers
None

Associated logs
None

C72TFA

Register type
Peg

Description
C72TFA counts the transfer allowed (TFA) messages that are received for a route. A TFA message indicates that the CCS7 network has a complete grade of service for this route. C72TFA is counted in the CM.

Associated registers
C7TFA

Extension registers
None

Associated logs
CCS166

C72TFC0

Register type
Peg

Description
C72TFC0 counts transfer controlled level 0 (zero) congestion status messages that are received for a route. This message indicates that there is no congestion on the route. C72TFC0 is counted in the CM.

Associated registers
C7TFC0, which counts transfer controlled level 0 congestion status messages that are received for a route

Extension registers
None

Associated logs
CCS172

C72TFC1

Register type
Peg

Description
C72TFC1 counts transfer controlled level 1congestion status messages that the system receives for a route. The message indicates that route congestion reached a threshold level set for level 1. User parts stop sending messages of priority 0. A routeset major alarm occurs. C72TFC1 is counted in the CM.

Associated registers
C7TFC1

Extension registers
None

Associated logs
CCS172

C72TFC2

Register type
Peg

Description
C72TFC2 counts transfer controlled level 2 congestion status messages received for a route. This message indicates that route congestion reached the threshold level set for level 2. User parts stop sending messages of priority 0 and 1. A routeset major alarm occurs. C72TFC2 is counted in the CM.

Associated registers
C7TFC2

Extension registers
None

Associated logs
CCS172

C72TFC3

Register type
Peg

Description
C72TFC3 counts messages received for a route. The message indicates that route congestion reached the threshold level set for level 3. User parts stop sending messages of priority 0 and 1 and 2. A routeset major alarm occurs. C72TFC3 is counted in the CM.

Associated registers
C7TFC3

Extension registers
None

Associated logs
CCS173

C72TFP

Register type
Peg

Description
C72TFP counts the transfer prohibited (TFP) status messages that the system receives for a route. This message indicates that the CCS7 network cannot deliver messages on the route. Either a major or a critical alarm occurs at the routeset.

The register is counted in the CM.

Associated registers
C7TFP

Extension registers
None

Associated logs
CCS168

C72TFR

Register type
Peg

Description
C72TFR counts the transfer restricted (TFR) status messages received for a route. This message indicates a degraded CCS7 network service for the route. The system delivers the messages at a pace slower than the normal rate. A routeset major alarm occurs at the routeset level. C72TFR is counted in the CM.

Associated registers
C7TFR

Extension registers
None

Associated logs
CCS167

C72XTFA

Register type
Peg

Description
C72XTFA counts the number of transfer allowed (TFA) messages received for a PPC route. A TFA message indicates that the CCS7 network has a complete grade of service for this PPC route. C72XTFA is counted in the CM.

Associated registers
C7XTFA

Extension registers
None

Associated logs
CCS180

C72XTFP

Register type
Peg

Description
C72XTFP counts the number of TFP status messages received for a route. This message indicates that the CCS7 network cannot deliver messages on this route. Either a major or a critical alarm occurs for the routeset. C72XTFP is counted in the CM.

Associated registers
C7XTFP

Extension registers
None

Associated logs
CCS182

C72XTFR

Register type
Peg

Description
C72XTFR counts the number of TFR status messages the system receives for a PPC route. This message indicates a degraded CCS7 network service for the route. The system delivers the messages at a pace that is slower than the normal rate. A major alarm occurs at the routeset level. C72XTFR is counted in the CM.

Associated registers
C7XTFR

Extension registers
None

Associated logs
CCS181

C7ROUTER

Description

OM group Common Channel Signaling 7 (CCS7) Router (C7ROUTER) captures CCS7 route information. The router receives messages from CCS7 peripheral modules and performs the routing function on these messages.

C7ROUTER tracks:

- the number of messages and bytes the system receives for routing
- the high watermarks of messages for each second the router receives
- the number of messages the system discards because of congestion
- the number of times and amount of time when the router is congested or out of service

These measurements determine if the router operates in capacity and indicate the work load during the OM period.

The following table lists the key and info fields associated with OM group C7ROUTER.

Key field	Info field
Router number	This field has two parts: the peripheral module (PM) type and the PM number of the router. Only LIU7 is supported as a PM type in BCS36.

Related functional groups

There are no functional groups associated with OM group C7ROUTER.

Registers

The following table lists the registers associated with OM group C7ROUTER and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7ROUTER

Register name	Measures
C7BUFOFL	CCS7 buffer overflow
C7ILLPHW	Inter-link-to-link protocol (ILLP) high watermark for messages received
C7INTOVL	Number of message service units the system discards because of interrupt overload
C7MTSHW	Message transport system (MTS) high watermark for messages received
C7RTBRT	CCS7 router bytes received for routing
C7RTCNG	Router reports first onset of congestion
C7RTCNGU	CCS7 router congested recorded in seconds
C7RTMSR	CCS7 router message signal units (MSU) received for routing (normal)
C7STHW	Signaling terminal high watermark for messages received
C7TOTHW	Total high watermark for messages received
C7RTOOS	C7 router out of service
C7RTOOSU	Length of time the C7 router was out of service

C7BUFOFL

Register type
Peg

Description
Register C7BUFOFL is set to zero.

Associated registers
None

Extension registers
None

Associated logs
None

C7ILLPHW

Register type
Peg

Description
C7ILLPHW is set to zero.

Associated registers
None

Extension registers
None

Associated logs
None

C7INTOVL

Register type
Peg

Description
Number of message service units the system discards because of interrupt overload.

Associated registers
C7INTOV2

Extension registers
None

Associated logs
None

C7MTSHW

Register type
Peg

Description
Message transport system (MTS) high watermark for messages received.

Associated registers
None

Extension registers
None

Associated logs
None

C7RTBRT

Register type
Peg

Description
C7RTBTR increases for each message signal unit (MSU) the CCS7 router receives when the system starts the routing function. This register records the number of bytes the system receives.

Associated registers
C7RTMSR

Extension registers
C7RTBTR2

Associated logs
None

C7RTCNG

Register type
Peg

Description
The system increases the register when router reports first onset of congestion from level 0 to level 1.

Associated registers
C7RTCNGU

Extension registers
None

Associated logs
CCS189

C7RTCNGU

Register type
Peg

Description
CCS7 router congested recorded in seconds

Associated registers
C7RTCNG

Extension registers
None

Associated logs
None

C7RTMSR

Register type
Peg

Description
C7RTMSR increases for each MSU the CCS7 router receives when the routing function is initiated.

Associated registers
C7RTBTR, which measures messages to route. The register records the number of bytes and not the number of units.

Extension registers
C7RTMSR2

Associated logs
None

C7STHW

Register type
Peg

Description
C7STHW is the register for signaling terminal high watermark for messages received. The register is set to zero.

Associated registers
None

Extension registers
None

Associated logs
None

C7TOTHW

Register type
Peg

Description
C7TOTHW is the register for total high watermark for messages received. The register is set to zero.

Associated registers
None

Extension registers
None

Associated logs
None

C7RTOOS

Register type
Peg

Description
C7RTOOS counts the number of times the C7 router is out of service. Register C7RTOOS increases when the router becomes system busy (sysbusy) or manual busy (manbusy) from an in-service state (InSv or ISTb). The register does not increase if the state toggles between sysbusy and manbusy.

Associated registers
C7RTOOSU

Extension registers
None

Associated logs
None

C7RTOOSU

Register type
Usage

Scan rate
10 s

Description
C7RTOOSU records the time in seconds that the C7 router is out of service because it is sysbusy, manbusy, or offline. C7RTOOSU records the time based on a 10-second scan when the router is offline.

Associated registers
C7RTOOS

Extension registers
None

Associated logs
None

C7RTESET

Description

OM group Common Channel Signaling 7 (CCS7) Routeset (C7RTESET) reports the performance and use of a CCS7 routeset. Signaling messages provide the address and link selector information that determines message routing. The messages describe a routeset, which contains:

- signaling paths (routes)
- linksets
- links in the linkset for routing a message to a destination

The system routeset management determines if the routing for transmitting messages is acceptable. If the route is acceptable, the system selects a working link from the linkset. If the route is not acceptable, the system examines other routes until the system finds or cannot find a working link. The system also receives remote congestion information over a route, and the system informs user parts of the congestion level.

The following table lists the key and info fields associated with OM group C7RTESET.

Key field	Info field
C7_ROUTESET_NUMBER Range: 0 to 254. Used as an index into table C7RTESET or to display by route name.	None

Related functional groups

There are no functional groups associated with OM group C7RTESET.

Registers

The following table lists the registers associated with OM group C7RTESET and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7RTESET

Register name	Measures
C7RSCNGU	CCS7 routeset congestion
C7RSFAIL	CCS7 routeset failure
C7RSMANB	CCS7 routeset manual busy
C7RSUNAU	CCS7 routeset not available
C7RTERR	CCS7 routing error

C7RSCNGU

Register type
Usage

Scan rate
10 seconds

Description
C7RSCNGU records routeset congestion. When the routeset is congested, a major alarm occurs on the CCS7 destination. The system only delivers higher priority messages.

Associated registers
None

Extension registers
None

Associated logs
CCS172

C7RSFAIL

Register type
Peg

Description
C7RSFAIL counts routeset failures where the routeset does not transmit messages. When the routeset does not transmit messages, the common channel signaling destination is not available. A critical alarm occurs. The register increases in the computing module (CM).

Associated registers
C7RSUNAU

Extension registers
None

Associated logs
CCS1514

C7RSMANB

Register type
Peg

Description
C7RSMANB increases when operating company personnel manually busy the routeset. The common channel signaling destination is not available. The register increases in the CM.

Associated registers
None

Extension registers
None

Associated logs
CCS152

C7RSUNAU

Register type
Usage

Scan rate
10 seconds

Description
C7RSUNAU records if the routeset transmits messages. This register does not increase when the routeset is offline. If the routeset does not transmit messages, one of the common channel signaling destinations is not available, and a critical alarm occurs. The register increases in the CM.

Associated registers
None

Extension registers
None

Associated logs
CCS154, CCS155

C7RTERR

Register type
Peg

Description
C7RTERR counts messages that the system cannot route through the routeset. The system cannot route through the routeset because of a routing error.

Associated registers
None

Extension registers
None

Associated logs
None

C7SCCP

Description

OM group CCS7 Signaling Connection Control Part (C7SCCP) reports the performance and use of the CCS7 signaling connection control part (SCCP). The registers count the number of:

- messages the SCCP routing control (SCRC) handles
- messages formatted to UDT user data
- formatted messages that arrive at the SCRC
- global title translations (GTT), messages that correctly reach their destinations
- messages that reach the destination
- messages that fail to reach the destination
- discarded messages with the priority level lower than the internal SCCP congestion level

The SCCP transfers signaling units and provides flexible GTT for different applications.

Connection-oriented signaling units use logical signaling connection. Connectionless units do not use logical signaling connection. Operational measurements count different aspects of connectionless services. Connectionless services appear in two categories:

- Class 0 data units arrive at different times and do not require sequencing
- Class 1 data units arrive in sequence

The SCRC routes messages that

- the message transfer part (MTP) delivers to local subsystems. The MTP uses SCCP connectionless control (SCLC) to deliver the messages.
- originate at local subsystems. Local subsystems are SCCP users. SCLC delivers the messages to other local subsystems.
- originate at local subsystems. The SCRC routes the messages to the network that uses the MTP.

The called party address (CDPA) includes the destination of the message that the application supplies. The CDPA consists of any group of a destination point code (DPC), subsystem number (SSN), or global title (GT). A GT is an application address. An example of a GT is an 800 number of the TCAP/E800 service. SCRC translates a GT to an address form that the SCCP and MTP can use to route the message. This form contains a DPC and an SSN, or a DPC and a GT.

SCCP connectionless control formats the user data to a unitdata (UDT) or extended unitdata (XUDT) message. This message is of the correct class with the requested options. The SCLC delivers these messages to SCRC. The SCRC routes the messages. The SCLC decodes and distributes messages for local subsystems to the correct subsystem. When a routing failure occurs, SCRC starts the return procedure for unitdata messages with the set return option parameter. The routing failure procedure of the SCLC formats the message and the routing failure reason. The routing failure procedure formats the routing failure reason to a UDTS or XUDTS message. The routing failure procedure delivers the message to SCRC. The SCRC routes the message to the originator.

The following table lists the key and info fields associated with OM group C7SCCP.

Key field	Info field
None	None

Related functional groups

CCS7 is associated with OM group C7SCCP.

Registers

The following table lists the registers associated with OM group C7SCCP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7SCCP (Sheet 1 of 2)

Register name	Measures
C7CLS1RX	CCS7 connectionless class 1 received
C7CLS1TX	CCS7 connectionless class 1 transmitted
C7CLS0RX	CCS7 connectionless class 0 received

Registers for OM group C7SCCP (Sheet 2 of 2)

Register name	Measures
C7CLS0TX	CCS7 connectionless class 0 transmitted
C7LOCSS	CCS7 local subsystem
C7MSGGT	CCS7 message global title translations
C7MSGHDL	CCS7 messages handled
C7RTBKSS	System routes CCS7 backup subsystem
C7RTFALL	CCS7 route failure all
C7RTFNTA	CCS7 routing failure no translation for address
C7RTFNTN	CCS7 routing failure no translation of such nature
C7RTFNWC	CCS7 routing failure network congestion
C7RTFNWF	CCS7 routing failure network failure
C7RTFSSC	CCS7 routing failure subsystem congestion
C7RTFSSF	CCS7 routing failure subsystem failure
C7RTFUEQ	CCS7 routing failure user unequipped
C7SYNERR	CCS7 syntax errors
C7UDTRX	CCS7 UDT received
C7UDTSRX	CCS7 UDTS received
C7UDTSTX	CCS7 UDTS sent
C7UDTTX	CCS7 UDT transmitted

C7CLS1RX

Register type
Peg

Description
C7CLS1RX counts unitdata (UDT) and the extended unitdata (XUDT) connectionless class 1 SCCP messages. The SCCP routing control (SCRC) receives these messages from the CCS7 network. The CCS7 network sends messages through the message transfer part (MTP). Connectionless class 1 messages are specified data units that have in-sequence delivery.

Associated registers
None

Extension registers
C7CLS1R2

Associated logs
None

C7CLS1TX

Register type
Peg

Description
C7CLS1TX counts unitdata (UDT) and the extended unitdata (XUDT) connectionless class 1 SCCP messages. The system routes these messages to the CCS7 network through the message transfer part (MTP). Connectionless class 1 messages are specified data units that have in-sequence delivery.

Associated registers
None

Extension registers
C7CLS1T2

Associated logs
None

C7CLS0RX

Register type
Peg

Description
C7CLS0RX counts unitdata (UDT) and extended unitdata (XUDT) connectionless class 0 SCCP messages. The SCCP routing control (SCRC) receives these messages from the CCS7 network. The CCS7 network sends the messages through the message transfer part (MTP). Connectionless class 0 messages are specified data units that do not have sequencing.

Associated registers
None

Extension registers
C7CLS0R2

Associated logs
None

C7CLS0TX

Register type
Peg

Description
C7CLS0TX counts unitdata (UDT) and extended unitdata (XUDT) connectionless class 0 SCCP messages that route to the CCS7 network through the message transfer part (MTP). Connectionless class 0 messages are specified data units that do not have sequencing.

Associated registers
None

Extension registers
C7CLS0T2

Associated logs
None

C7LOCSS

Register type
Peg

Description
C7LOCSS counts UDT/UDTS and XUDT/XUDTS messages for a local subsystem. The SCCP routing control (SCRC) receives these messages from the CCS7 network through the message transfer part (MTP).

Associated registers
None

Extension registers
C7LOCSS2

Associated logs
None

C7MSGGT

Register type
Peg

Description
C7MSGGT counts UDT/UDTS and XUDT/XUDTS messages that SCCP routing control (SCRC) receives. The messages require global title translation (GTT).

Associated registers
None

Extension registers
C7MSGGT2

Associated logs
None

C7MSGHDL

Register type
Peg

Description
The register C7MSGHDL counts:

- UDT/UDTS and XUDT/XUDTS messages that SCCP routing control (SCRC) handles
- messages that local users send through SCCP connectionless control (SCLC)
- messages that the CCS7 network sends through the message transfer part (MTP)
- unitdata service (UDTS) messages
- extended unitdata service (XUDTS) messages

Associated registers
C7XUDTRX, C7XUDTSR, C7XUDTTX, C7XUDTST, C7UDTRX, C7UDTSTX, C7UDTTX and C7UDTSRX

Extension registers
C7MSGHD2

Associated logs
None

C7RTBKSS

Register type
Peg

Description
C7RTBKSS counts UDT/UDTS and XUDT/XUDTS messages that the system routes to a backup subsystem. The system routes these messages to a backup system when the primary subsystem is not available.

Associated registers
None

Extension registers
None

Associated logs
None

C7RTFALL

Register type
Peg

Description
C7RTFALL counts UDT/UDTS and XUDT/XUDTS messages that SCCP routing control (SCRC) receives that the system cannot route. The system cannot route the following messages:

- from the link through the message transfer part (MTP)
- from local subsystems routed through SCCP connectionless control (SCLC)
- with the incorrect encoding or with unknown fields
- with the internal priority code lower than the internal congestion level

C7RTFALL increases when the system attempts to send SCCP messages over a routeset that is offline. The system does not generate a log.

Associated registers
C7XHCERR

Extension registers
None

Associated logs
CCS201, CCS202, CCS203, CCS204, CCS205, CCS228, CCS241, CCS243, CCS246, CCS260, TCAP101

C7RTFNTA

Register type
Peg

Description
C7RTFNTA counts messages that SCCP routing control (SCRC) receives that the system cannot route. The system cannot route these messages because the field values No Translation for Such Address appear in the called party address (CDPA). These field values are not valid. This field value indicates that a translation in the global title translation table is not present. The translation is for the global title in the CDPA of the message.

Associated registers
None

Extension registers
None

Associated logs
TCAP101

C7RTFNTN

Register type
Peg

Description
C7RTFNTN counts messages that SCCP routing control (SCRC) receives. The system cannot route these messages because the field values No Translation for an Address of Such Nature appear in the called party address (CDPA) of the message. These field values are not valid.

Associated registers
None

Extension registers
None

Associated logs
CCS202, TCAP101

C7RTFNWC

Register type
Peg

Description
C7RTFNWC counts messages that SCCP routing control (SCRC) receives. The system cannot route these messages because of network congestion.

Associated registers
None

Extension registers
None

Associated logs
CCS260, TCAP101

C7RTFNWF

Register type
Peg

Description
C7RTFNWF counts messages that SCCP routing control (SCRC) receives. The system cannot route these messages because of network failure.

Associated registers
None

Extension registers
None

Associated logs
TCAP101

C7RTFSSC

Register type
Peg

Description
C7RTFSSC counts messages that SCCP routing control (SCRC) receives. The system cannot route these messages because of subsystem congestion.

Associated registers
None

Extension registers
None

Associated logs
TCAP101

C7RTFSSF

Register type
Peg

Description
C7RTFSSF counts messages that SCCP routing control (SCRC) receives. The system cannot route these messages because of subsystem failure.

Associated registers
None

Extension registers
None

Associated logs
TCAP101

C7RTFUEQ

Register type
Peg

Description
C7RTFUEQ counts messages that SCCP routing control (SCRC) receives. The system cannot route these messages because of a destination local subsystem that is not known.

Associated registers
None

Extension registers
None

Associated logs
CCS204, TCAP101

C7SYNERR

Register type
Peg

Description
C7SYNERR counts UDT/UDTS and XUDT/XUDTS messages that SCCP routing control (SCRC) receives. The system cannot route these messages because syntax errors occur in the called party address (CDPA).

Associated registers
None

Extension registers
None

Associated logs
None

C7UDTRX

Register type
Peg

Description
C7UDTRX counts unitdata (UDT) connectionless SCCP messages. The SCCP routing control (SCRC) receives these messages from the CCS7 network through the message transfer part (MTP).

Associated registers
None

Extension registers
C7UDTRX2

Associated logs
None

C7UDTSRX

Register type
Peg

Description
C7UDTSRX counts unitdata service (UDTS) connectionless SCCP messages. The SCCP routing control (SCRC) receives these messages from the CCS7 network through the message transfer part (MTP). UDTS messages consist of a message that failed. This message has the return option and a routing failure reason.

Associated registers
None

Extension registers
None

Associated logs
None

C7UDTSTX

Register type
Peg

Description
CCS7 UDTS sent (C7UDTSTX) counts unitdata service (UDTS) connectionless SCCP messages that the system routes to the network through the message transfer part (MTP). The UDTS message contains a message that failed. This message contains the return option and the routing failure reason.

Associated registers
None

Extension registers
None

Associated logs
TCAP101

C7UDTTX

Register type
Peg

Description
C7UDTTX counts unitdata (UDT) connectionless SCCP messages. The system routes these messages to the network through the message transfer part (MTP).

Associated registers
None

Extension registers
C7UDTTX2

Associated logs
None

C7SCCPCO

Description

OM group C7 SCCP Connection Oriented (C7SCCPCO) measures the volume of traffic and failures on the class 2 signaling connection control part (SCCP). C7SCCPCO counts the total number of messages received and sent over the DMS-300 switch. The OM group produces separate counts for each type of message. C7SCCPCO also counts the number of times a connection is rejected or fails and has to be taken down.

The counts establish the overhead for the use of SCCP class 2 connections and point out design inefficiencies or indicate that you must adjust the timers. The overhead is normally 10 to25 percent of the total DT1 messages. You must enter subsystems that support connection oriented SCCPs into table C7 LOCSSN.

The following table lists the key and info fields associated with OM group C7SCCPCO.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group C7SCCPCO.

Registers

The following table lists the registers associated with OM group C7SCCPCO and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7SCCPCO (Sheet 1 of 2)

Register name	Measures
C7CCRX	SCCP CC messages received
C7CCTX	SCCP CC messages transmitted
C7CLS2RX	SCCP class 2 messages received
C7CLS2TX	SCCP class 2 messages transmitted
C7COFAIL	SCCP connection failed

Registers for OM group C7SCCPCO (Sheet 2 of 2)

Register name	Measures
C7COMREJ	SCCP connection messages rejected
C7CREFRX	SCCP CREF message received
C7CREFTX	SCCP CREF messages transmitted
C7CRRX	SCCP CR messages received
C7CRTX	SCCP CR messages transmitted
C7DT1RX	SCCP DT1 messages received
C7DT1TX	SCCP DT1 messages transmitted
C7ITRX	SCCP IT messages received
C7ITTX	SCCP IT messages transmitted
C7RLCRX	SCCP release complete messages received
C7RLCTX	SCCP RLC messages transmitted
C7RLSDRX	SCCP RLSD messages received
C7RLSDTX	SCCP RLSD messages transmitted

C7CCRX

Register type
Peg

Description
C7CCRX counts the number of times the switch receives a connection confirm (CC) message from the application.

Associated registers
C7CLS2RX

Extension registers
C7CCR2

Associated logs
None

C7CCTX

Register type
Peg

Description
C7CCTX counts the number of times the switch sends a connection confirm (CC) message to the application.

Associated registers
C7CLS2TX

Extension registers
C7CCT2

Associated logs
None

C7CLS2RX

Register type
Peg

Description
C7CLS2RX counts the number of times the switch receives a correct class 2 message from the application. This register contains the total number of incoming correct class 2 messages sent over the CCS7 link.

Associated registers
None

Extension registers
C7CLS2R2

Associated logs
None

C7CLS2TX

Register type
Peg

Description
C7CLS2TX counts the number of times the switch sends a valid class 2 message to the application. The value in this register indicates the total number of valid outgoing messages transmitted across the CCS7 link.

Associated registers
None

Extension registers
C7CLS2T2

Associated logs
None

C7COFAIL

Register type
Peg

Description
C7COFAIL counts the number of connections that fail because of software errors such as

- the IT message contains a correct class that is not correct
- an ERR message is received, or a CC message contains data that is not correct

When this register increases, the system dismantles the connection.

Associated registers
None

Extension registers
None

Associated logs
None

C7COMREJ

Register type
Peg

Description
C7COMREJ counts the number of times the system discards a connection oriented message because it contains a message type that is not supported. The following message types are not supported: DT2 (Data Form 2), AK (Data acknowledge), ED (Expedited data), EA (Expedited data acknowledge), RSR (Reset request), and RSC (Reset confirm).

Associated registers
None

Extension registers
None

Associated logs
None

C7CREFRX

Register type
Peg

Description
C7CREFRX counts the number of times the switch receives a connection refused (CREF) message from the application.

Associated registers
C7CLS2RX

Extension registers
None

Associated logs
None

C7CREFTX

Register type
Peg

Description
C7CREFTX counts the number of times the switch sends a connection refused (CREF) message to the application. This event occurs, for example, when the local subsystem is not in service or if the maximum number of connections (2048) are already established.

Associated registers
C7CLS2TX

Extension registers
None

Associated logs
None

C7CRRX

Register type
Peg

Description
C7CRRX counts the number of times the switch receives a connection request (CR) message from the application.

Associated registers
C7CLS2RX

Extension registers
C7CRR2

Associated logs
None

C7CRTX

Register type
Peg

Description
C7CRTX counts the number of times the switch sends a connection request (CR) message to the application.

Associated registers
C7CLS2TX

Extension registers
C7CRT2

Associated logs
None

C7DT1RX

Register type
Peg

Description
C7DT1RX counts the number of times the switch receives a Data Form 1 (DT1) message from the application.

Associated registers
C7CLS2RX

Extension registers
C7DT1R2

Associated logs
None

C7DT1TX

Register type
Peg

Description
C7DT1TX counts the number of times the switch sends a Data Form 1 (DT) message to the application.

Associated registers
C7CLS2TX

Extension registers
C7DT1T2

Associated logs
None

C7ITRX

Register type
Peg

Description
C7ITRX counts the number of times the switch receives an inactivity test (IT) message from the application. This event occurs when a timeout of the inactivity send timer occurs at the far end.

Associated registers
None

Extension registers
None

Associated logs
None

C7ITTX

Register type
Peg

Description
C7ITTX counts the number of times the switch sends an inactivity test (IT) message to the application. This event occurs when a timeout of the inactivity send timer occurs at the local end. This timer tracks the time between consecutive messages sent on an active connection in table SCCPTMR contains the value of this timer.

The value in this register is used to determine if the timeouts are set at too short an interval and are not efficient because of the large number of IT messages sent.

Associated registers
None

Extension registers
None

Associated logs
None

C7RLCRX

Register type
Peg

Description
C7RLCRX counts the number of times the switch receives a release complete (RLC) message from the application. The far end sends this message in response to a RLSD message from the local end.

Associated registers
C7CLS2RX

Extension registers
C7RLCR2

Associated logs
None

C7RLCTX

Register type
Peg

Description
C7RLCTX counts the number of times the switch sends a release complete (RLC) message to the application. The switch sends this message in response to an RLSD message if a valid connection was present or not.

Associated registers
C7CLS2TX

Extension registers
C7RLCT2

Associated logs
None

C7RLSDRX

Register type
Peg

Description
C7RLSDRX counts the number of times the switch receives a released (RLSD) message from the application. This message indicates that the far end wants to release the established connection.

Associated registers
C7CLS2RX

Extension registers
C7RLSDR2

Associated logs
None

C7RLSDTX

Register type
Peg

Description
C7RLSDTX counts the number of times the switch sends a released (RLSD) message to the application.

Associated registers
C7CLS2TX

Extension registers
C7RLSDT2

Associated logs
None

C7SCCPX

Description

OM group C7 SCCP Connection Extended Unitdata (C7SCCPX) measures performance and use of extended unitdata and extended unitdata service (XUDT/XUDTS) messages. Registers count the number of messages that are formatted into extended unitdata messages and extended unitdata service messages. The registers also count messages that encounter reassembly errors and messages that encounter hop counter problems.

The following table lists the key and info fields associated with OM group C7SCCPX.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group C7SCCPX.

Registers

The following table lists the registers associated with OM group C7SCCPX and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group C7SCCPX (Sheet 1 of 2)

Register name	Measures
C7XUDTRX	CCS7 XUDT received
C7XUDTSR	CCS7 XUDTS received
C7XUDTTX	CCS7 XUDT transmitted
C7XUDTST	CCS7 XUDTS transmitted
C7XTIMER	CCS7 reassembly error, timer expired
C7XSGTOS	CCS7 reassembly error, XUDT message received out of sequence

Registers for OM group C7SCCPX (Sheet 2 of 2)

Register name	Measures
C7XRSERR	CCS7 reassembly error, no reassembly space.
C7XHCERR	CCS7 hop count violation

C7XUDTRX

Register type
Peg

Description
C7XUDTRX counts the number of extended unitdata (XUDT) SCCP messages without connections. The SCCP routing control (SCRC) receives the XUDT SCCP messages without connections from the CCS7. The XUDT messages without connections pass through the message Transfer Part (MTP)

Associated registers
C7MSGHDL

Extension registers
C7XUDTR2

Associated logs
None

C7XUDTSR

Register type
Peg

Description
C7XUDTSR counts the number of extended unitdata service (XUDTS) SCCP messages without connections. The SCCP routing control (SCRC) receives these messages from the CCS7 network through the MTP.

Associated registers
C7MSGHDL

Extension registers
None

Associated logs
None

C7XUDTTX

Register type
Peg

Description
C7XUDTTX counts the number of extended unitdata (XUDT) SCCP messages without connection routed into the network through the MTP.

Associated registers
C7MSGHDL

Extension registers
C7XUDTT2

Associated logs
None

C7XUDTST

Register type
Peg

Description
C7XUDTST counts the number of extended unitdata service (XUDTS) SCCP messages without connection. The system routes these messages into the network through the Message Transfer Part (MTP).

Associated registers
C7MSGHDL

Extension registers
None

Associated logs
None

C7XTIMER

Register type
Peg

Description
C7XTIMER counts the number of extended unitdata (XUDT) SCCP messages without connections that could not be assembled again before the reassembly timer expired.

Associated registers
None

Extension registers
None

Associated logs
None

C7XSGTOS

Register type
Peg

Description
C7XSGTOS counts the number of extended unitdata (XUDT) SCCP messages without connection that could not be reassembled. The message could not be reassembled because a segment was received out of sequence.

Associated registers
None

Extension registers
None

Associated logs
CCS201

C7XRSERR

Register type
Peg

Description
C7XRSERR counts the number of extended unitdata and extended unitdata service (XUDT/XUDTS) SCCP messages without connection that could not be reassembled as a result of lack of resources.

Associated registers
None

Extension registers
None

Associated logs
CCS201

C7XHCERR

Register type
Peg

Description
C7XHCERR counts the number of extended unitdata and extended unitdata service (XUDT/XUDTS) SCCP messages without connections discarded as a result of a hop counter problem.

Associated registers
None

Extension registers
None

Associated logs
CCS241

CAINTRIG

Description

OM group Carrier AIN Trigger (CAINTRIG) provides OMs for each UCS07 Carrier Advanced Intelligent Network CAIN) trigger and Event Detection Point.

The following table lists the key and info fields associated with OM group CAINTRIG. CAINTRIG contains 16 tuples that are on each DMS-250/300 switch.

Key field	Info field
OM_TRIGGER_TYPE	None

The following table lists the CAINTRIG tuples.

Tuples in OM group CAINTRIG (Sheet 1 of 2)

Tuple	Represents
TOTAL	Total OM tuples pegged in this group for all of the different trigger/Event Detection Points
OFFHKIMM	OMs relating to calls that trigger at the Off_Hook_Immediate trigger
OFTRREQ	OMs relating to calls that trigger at the O_Feature_Requested trigger
PRIBCHNL	OMs relating to calls that trigger at the PRI_B-Channel trigger
SIOTRK	OMs relating to calls that trigger at the Shared_Interoffice_Trunk trigger
CUSTDP	OMs relating to calls that trigger at the Customized_Dialing_Plan trigger
SPECDIG	OMs relating to calls that trigger at the Specific_Digit_String trigger
NETBUSY	OMs relating to calls that trigger at the Network_Busy trigger
OCLDBUSY	OMs relating to calls that trigger at the O_Called_Party_Busy trigger

Tuples in OM group CAINTRIG (Sheet 2 of 2)

Tuple	Represents
ONOANSW	OMs relating to calls that trigger at the O_No_Answer trigger
OFFCCODE	OMs relating to calls that trigger at the Office_Code trigger
NETBUSYE	OMs relating to calls that encounter the Network_Busy Event Detection Point
OTERMSZE	OMs relating to calls that encounter the O_No_Answer Event Detection Point
OCLDBSYE	OMs relating to calls that encounter the O_Called_Party_Busy Event Detection Point
OANSWRE	OMs relating to calls that encounter the O_No_Answer Event Detection Point
ONOANSRE	OMs relating to calls that encounter the O_No_Answer Event Detection Point

Related functional groups

There are no functional groups associated with OM group CAINTRIG.

Registers

The following table lists the registers associated with OM group CAINTRIG and what they measure. For a description of a register, click on the register name.

Registers for OM group CAINTRIG (Sheet 1 of 2)

Register name	Measures
BLOCKED	Blocked Calls
EDPNOTIF	Event Detection Point Notifications
EDPREQ	Event Detection Point Requests
EDPSRCVD	Event Detection Points Received
ERROR	Error Message Scenario Encountered
FEATADDR	Feature Address Processor

Registers for OM group CAINTRIG (Sheet 2 of 2)

Register name	Measures
FEATAUTH	Feature Authorization Code Processor
FEATCARD	Feature Card Trigger
IGNORE	Ignored AIN Triggers
ISCONUCC	ISUP unsuccessful circuit
LEAVETDP	Leave Trigger Detection Point
NEXTCNRTE	Next CAIN Route
NEXTRTE	Next Route Trigger Action
NO_MATCH	No Match
NOTRIG	No Trigger
QUERY	Trigger Queries
QUERYSCU	Query Service Control Unit
RCLRCONV	Resource Clear Conversation
RESPRCVD	Trigger Responses Received
STRCONV	Send To Resource Conversation

BLOCKED

Register type
Peg

Description
BLOCKED counts the number of times a call has BLOCK datafilled as the trigger action in the trigger table.

Associated registers
None

Extension registers
None

Associated logs
None

EDPNOTIF

Register type
Peg

Description
EDPNOTIF counts the number of Event Detection Point Notification messages the switch encounters and reports to the SCP.

Associated registers
None

Extension registers
None

Associated logs
None

EDPREQ

Register type
Peg

Description
EDPREQ counts the number of Event Detection Point Requests the switch encounters and reports to the SCP.

Associated registers
None

Extension registers
None

Associated logs
None

EDPSRCVD

Register type
Peg

Description
EDPSRCVD counts the number of times the switch receives a valid Request_Report_BCM_Event component.

Associated registers
None

Extension registers
None

Associated logs
VAMP901

ERROR

Register type
Peg

Description
ERROR counts the number of times a CAIN fatal application error occurs during call processing.

Associated registers
None

Extension registers
None

Associated logs
None

FEATADDR

Register type
Peg

Description
FEATADDR counts the number of times a CAIN call has FEAT datafilled as the trigger action in table OFTRREQ and is datafilled with ADDR feature processor.

Associated registers
None

Extension registers
None

Associated logs
None

FEATAUTH

Register type
Peg

Description
FEATAUTH counts the number times a CAIN call has FEAT datafilled as the trigger action in table OFTRREQ and is datafilled with AUTH feature processor.

Associated registers
None

Extension registers
None

Associated logs
None

FEATCARD

Register type
Peg

Description
FEATCARD counts the number times a CAIN call has FEAT datafilled as the trigger action in table OFTRREQ and is datafilled with CARD feature processor.

Associated registers
None

Extension registers
None

Associated logs
None

IGNORE

Register type
Peg

Description
IGNORE counts the number of times a CAIN call has IGNORE datafilled as the trigger action in the trigger table or encounters an Event Detection Point (EDP) with an IGNORE action specified in the appropriate EDP action extension parameter.

Associated registers
None

Extension registers
None

Associated logs
None

ISCONUCC

Register type
Peg

Description
ISCONUCC counts the number of call attempts that are unsuccessful because there are no correct idle circuits in another office to handle the call.

Associated registers
None

Extension registers
None

Associated logs
None

LEAVETDP

Register type
Peg

Description
LEAVETDP counts the number of times a CAIN call has LEAVE_TDP datafilled as the trigger action in the trigger table. Call processing continues, at this current TDP (Trigger Detection Point) without checking any remaining triggers.

Associated registers
None

Extension registers
None

Associated logs
None

NEXTCNRTE

Register type
Peg

Description
NEXTCNRTE counts the number of times a CAIN call has NEXTCNRTE datafilled as the trigger action.

Tables NETBUSY, OCLDBUSY, and ONOANSWR may have NEXTCNRTE datafilled as the trigger action in trigger tables. Tables NETBUSYE, OCLDBUSYE, ONOANSWRE may have NEXTCNRTE action specified in the appropriate EDP action extension parameter.

Associated registers
None

Extension registers
None

Associated logs
None

NEXTRTE

Register type
Peg

Description
NEXTRTE counts the number of times a CAIN call has NEXTRTE datafilled as the trigger action in the trigger table or encounters an EDP with NEXTRTE action specified in the appropriate EDP action extension parameter.

Tables NETBUSY, OCLDBUSY, ONOANSWR may have NEXTRTE datafilled as the trigger action in the trigger table. Tables NETBUSYE, OCLDBUSYE, ONOANSWRE may have NEXTRTE action specified in the appropriate EDP action extension parameter.

Associated registers
None

Extension registers
None

Associated logs
None

NO_MATCH

Register type
Peg

Description
NO_MATCH counts the number of times a CAIN call evaluates a trigger with no match in the corresponding trigger table.

Associated registers
None

Extension registers
None

Associated logs
None

NOTRIG

Register type
Peg

Description
NOTRIG counts the number of times a CAIN call has CONT_NOTRIG datafilled as the trigger action in the trigger table. Call processing continues, at this current TDP (Trigger Detection Point) without checking any remaining triggers.

Associated registers
None

Extension registers
None

Associated logs
None

QUERY

Register type
Peg

Description
QUERY counts the number of times a call queries the SCP.

Associated registers
None

Extension registers
None

Associated logs
None

QUERYSCU

Register type
Peg

Description
QUERYSCU counts the number of times a CAIN call queries the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

RCLRCONV

Register type
Peg

Description
RCLRCONV counts the number of times the switch sends a Resource Clear message in a conversation package.

Associated registers
None

Extension registers
None

Associated logs
None

RESPRCVD

Register type
Peg

Description
RESPRCVD counts the number of responses the switch receives from the SCP that can be decoded and the requested action attempted. This register is pegged when the switch receives messages Analyze_Route, Disconnect, Continue, and Send _To_Resource.

Associated registers
None

Extension registers
None

Associated logs
None

STRCONV

Register type
Peg

Description
STRCONV counts the number of times the switch receives a Send To Resource message in a conversation package.

Associated registers
None

Extension registers
None

Associated logs
None

CALLFWD

Description

Call Forward (CALLFWD)

The following CALLFWD registers provide information about incoming calls. The CALLFWD uses the following call forward features to redirect these calls:

- Call Forward Busy (CFB) forwards calls from a busy line to any other line.
- Call Forward Don't Answer (CFD). When incoming calls are not answered within a specified time period, this feature forwards calls to another line. The operating company specifies this time period.
- Call Forward Fixed (CFF) forwards calls from a line to a fixed customer-defined location.
- Call Forward Intragroup (CFI) forwards calls from a line to any customer-defined location in the customer group.
- Control of Multiple Call Forwarding (CMCF). This feature limits the number of calls forwarded by a Meridian Digital Centrex (MDC) customer line at the same time.
- Call Forward Simultaneous/Screening (CFS) allows an operating company to impose a limit on calls forwarded at the same time. The limit is between 1 and 1024 on the number of calls forwarded through a call forwarding base station.
- Call Forward Timed (CFT) times a call that the CFB or CFD feature forwards. The CFT routes the call to treatment if the call is not answered before the timer expires.
- Call Forward Unconditional (CFU) forwards calls from a line to a customer-defined location. The customer-defined location can be inside and outside the customer group, and includes the attendant.
- Universal Access to Call Forwarding (UCFW). This feature provides universal access to Call Forwarding for telephones with a line class code of RES, RES-1FR, and RES-1MR.

Note: Registers CFDATTD, CFBATTD, CFUATTD, CFDXMPTD, and CFBXMPTD are pegged for NI-2 ISDN circuit mode data (CMD) calls only. Registers continue to be pegged for voiceband information (VI) calls.

The OM group CALLFWD provides one tuple for each key.

- Key field: IBNG_INDEX.
  Key to CALLFWD. Identifies up to 4096 customer groups.
- Info field: OMIBNGINFO
  Customer name as defined in field CUSTNAME in table CUSTHEAD.

Key field	Info field
IBNG_INDEX	OMIBNGINFO

The following fields in the following tables must be set:

- Table OFCENG:
  - CFW_EXT_BLKS
  - NO_OF_FTR_DATA_BLKS
  - NUMCPWAKE
  - FTRQ2WAREAS
- Table OFCOPT:
  - IBN_CFW
- Table CUSTSTN:
- CFDATIM for register DFDCNCL

Related functional groups

The following functional groups are associated with OM group CALLFWD:

- MDC Meridian Digital Centrex
- RES Residential Enhanced Services

Registers

The following table lists the registers associated with OM group CALLFWD and what they measure. For a description of a register, click on the register name.

Registers for OM group CALLFWD

Register name	Measures
CFBATT	Call Forward Busy Attempt
CFBATT2	Call Forward Busy Attempt Extension

Registers for OM group CALLFWD

Register name	Measures
CFBEXMPT	Call Forward Busy Exempt
CFBFAIL	Call Forward Busy Failure
CFBOVFL	Call Forward Busy Overflow
CFBSOV	Call Forward Busy Call Forward Simultaneous and Screening Overflow
CFDATT	Call Forward Don't Answer Attempt
CFDATT2	Call Forward Don't Answer Attempt Extension
CFDCNCL	Call Forward Don't Answer Cancellations
CFDCNCL2	Call Forward Don't Answer Cancellations Extension
CFDEXMPT	Call Forward Don't Answer Exempt
CFDFAIL	Call Forward Don't Answer Failure
CFDOVFL	Call Forward Don't Answer Overflow
CFDSOV	Call Forward Don't Answer Call Forward Simultaneous and Screening Overflow
CFUATT	Call Forward Unconditional Attempts
CFUATT2	Call Forward Unconditional Attempts Extension
CFUFAIL	Call Forward Unconditional Failure
CFUIFSOV	Call Forward Unconditional/Integrated/Fixed Simultaneous and Screening Overflow
CFUOVFL	Call Forward Unconditional Overflow
CMCFEOV	Control of Multiple Call Forwarding External Overflow
CMCFIOV	Control of Multiple Call Forwarding Intragroup Overflow

Registers for OM group CALLFWD

Register name	Measures
CUSPACT	Call Forward Usage Sensitive Pricing Activation
CUSPFAIL	Call Forward Usage Sensitive Pricing Failure
CUSPDEA	Call Forward Usage Sensitive Pricing Deactivation
CUSPOVR	Call Forward Usage Sensitive Pricing Overload
CFTBATT	Call Forward Timed for Call Forward Busy Attempts
CFTBFAIL	Call Forward Timed for Call Forward Busy Failures
CFTDATT	Call Forward Timed for Call Forward Don't Answer Attempts
CFTDFAIL	Register Call Forward Timed for Call Forward Don't Answer Failures
CFDATTD	Call Forward Don't Answer Attempt Data
CFBATTD	Call Forward Busy Attempt Data
CFUATTD	Call Forward Universal Attempt Data
CFDXMPTD	Call Forward Don't Answer Exempt Data
CFBXMPTD	Call Forward Busy Exempt Data

CFBATT

Register type
Peg

Description
Register Call Forward Busy Attempt (CFBATT)

Register CFBATT counts attempts to forward a call from a busy line to any other line.

Associated registers
There are no associated registers.

Extension registers
CFBATT2

Associated logs
There are no associated logs.

CFBATT2

Register type
Peg

Description
Register Call Forward Busy Attempt Extension (CFBATT2)

Register CFBATT2 is the extension register for CFBATT. Register CFBATT2 increases when the count for CFBATT reaches maximum. At this point CFBATT2 increases by one, and CFBATT resets to zero.

Associated registers
CFBATT

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFBEXMPT

Register type
Peg

Description
Register Call Forward Busy Exempt (CFBEXMPT)

Register CFBEXMPT counts failed attempts to forward a call from a busy line to another line. These attempts fail because the called number is exempt from call forwarding busy internal (CBI) or external (CBE) calls when busy.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

CFBFAIL

Register type
Peg

Description
Register Call Forward Busy Failure (CFBFAIL)

Register CFBFAIL counts failed attempts to forward a call from a busy line to any other line because of feature restrictions.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

CFBOVFL

Register type
Peg

Description
Register Call Forward Busy Overflow (CFBOVFL)

Register CFBOVFL counts failed attempts to forward a call from a busy line to any other line. These attempts fail because of too many software resource requests.

The operating company must enter office parameters CFW_EXT_BLKS and FTRQ2WAREAS in table OFCENG for register CFBOVFL to count.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

CFBSOV

Register type
Peg

Description
Register Call Forward Busy Call Forward Simultaneous and Screening Overflow (CFBSOV)

Register CFBSOV counts requests for call forwarding that the system denies. The system denies requests because the request to forward a call exceeds the maximum CFB simultaneous limit. The call forwarding occurs from a busy line to any other line.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a line-originated call to treatment.

The system generates TRK138 when the system routes a trunk-originated call to treatment.

CFDATT

Register type
Peg

Description
Register Call Forward Don't Answer Attempt (CFDATT)

Register CFDATT counts attempts to forward to any other line when the subscriber does not answer incoming calls in specified time period. The operating company specifies the time period.

Associated registers
There are no associated registers.

Extension registers
CFDCNCL

Associated logs
There are no associated logs.

CFDATT2

Register type
Peg

Description
Register Call Forward Don't Answer Attempt Extension (CFDATT2)

Register CFDATT2 is the extension register for CFDATT. Register CFDATT2 increases when the count for CFDATT reaches maximum. At this point CFDATT2 increases by one, and CFDATT resets to zero.

Associated registers
There are no associated registers.

Extension registers
CFDATT

Associated logs
There are no associated logs.

CFDCNCL

Register type
Peg

Description
Register Call Forward Don't Answer Cancellations (CFDCNCL)

Register CFDCNCL counts cancellations of the call forward don't answer option. Cancellations occur when the subscriber answers a call forwarded to another line before a specified time period. The operating company specifies the time period.

The operating company must enter office parameter CFDATIM in table CUSTSTN with values of 12 to 60 s to indicate the timeout period.

Associated registers
There are no associated registers.

Extension registers
CFDCNCL2

Associated logs
There are no associated logs.

CFDCNCL2

Register type
Peg

Description
Register Call Forward Don't Answer Cancellations Extension (CFDCNCL2)

Register CFDCNCL2 is the extension register for CFDCNCL. Register CFDCNCL2 increases when the count for CFDCNCL reaches maximum. At this point CFDCNCL2 increases by one, and CFDCNCL resets to zero.

Associated registers
CFDCNCL

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFDEXMPT

Register type
Peg

Description
Register Call Forward Don't Answer Exempt (CFDEXMPT)

Register CFDEXMPT counts failed attempts to forward to another line. Register CFDEXMPT counts failed attempts when the subscriber does not answer incoming calls in a specified time period. The operating company specifies the time period. This register is only pegged when the call cannot forward because CDI or CDE is on the line.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFDFAIL

Register type
Peg

Description
Register Call Forward Don't Answer Failure (CFDFAIL)

Register CFDFAIL counts failed attempts to forward to any other lines. Register CFDFAIL counts failed attempts when the subscriber does not answer incoming calls in a specified time period. The operating company specifies the time period because of feature restrictions.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

CFDOVFL

Register type
Peg

Description
Register Call Forward Don't Answer Overflow (CFDOVFL)

Register CFDOVFL counts failed attempts to forward to any other lines. Register CFDOVFL counts failed attempts when the subscriber does not answer incoming calls in a specified time period.

The operating company specifies the time period because of too many software resource requests. The operating company must define office parameters CFW_EXT_BLKS, NO_OF_FTR_DATA_BLKS,NUMCPWAKE, and FTRQ2WAREAS in table OFCENG for register CFDOVFL to count.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

CFDSOV

Register type
Peg

Description
Register Call Forward Don't Answer Call Forward Simultaneous and Screening Overflow (CFDSOV)

Register CFDSOV counts call forwarding requests that the system denied. The system denied the requests because the request to forward a call exceeds the maximum CFD simultaneous limit. This call forwarding occurs from an idle line to any other line.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a line-originated call to treatment.

The system generates TRK138 when the system routes a trunk-originated call to treatment.

CFUATT

Register type
Peg

Description
Register Call Forward Unconditional Attempts (CFUATT)

Register CFUATT counts attempts to forward a call terminating on an IBN line that has the CFU, CFI, or CFF features.

Associated registers
There are no associated registers.

Extension registers
CFUATT2

Associated logs
There are no associated logs.

CFUATT2

Register type
Peg

Description
Register Call Forward Unconditional Attempts Extension (CFUATT2)

Register CFUATT2 is the extension register for CFUATT. Register CFUATT2 increases when the count for CFUATT reaches maximum. At this point CFUATT2 increases by one, and CFUATT resets to zero.

Associated registers
CFUATT

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFUFAIL

Register type
Peg

Description
Register Call Forward Unconditional Failure (CFUFAIL)

Register CFUFAIL counts requests for call forwarding that the system denied. The denial occurs because the requests attempt to forward a call to an IBN line that has CFU, CFI, or CFF features. The system does not permit forwarding a call to an IBN line that has CFU, CFI, or CFF.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

CFUIFSOV

Register type
Peg

Description
Register Call Forward Unconditional/Integrated/Fixed Simultaneous and Screening Overflow (CFUIFSOV)

Register CFUIFSOV counts requests for call forwarding that the system denies because the requests exceed the maximum CFU simultaneous limit.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

CFUOVFL

Register type
Peg

Description
Register Call Forward Unconditional Overflow (CFUOVFL)

Register CFUOVFL counts failed attempts to forward a call to another line because the system cannot obtain a required software resource.

For register CFUOVFL to increase, the operating company must define fields CFW_EXT_BLKS and FTRQ2WAREAS in table OFCENG.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

CMCFEOV

Register type
Peg

Description
Register Control of Multiple Call Forwarding External Overflow (CMCFEOV)

Register CMCFEOV counts the number of calls at the same time that the system does not forward outside the customer group. The system does not forward calls outside the customer group because the number of calls exceed the maximum limit set.

The maximum limit equals the total number of the customer group value and the base station value. The customer group value is field NCFE in table CUSTSTN, and the base station value is field ANCFE in table KSETFEAT or IBNFEAT.

The operating company must enter the CMCF option in table CUSTSTN for this register to increase.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a line-originated call to a treatment.

The system generates TRK138 when the system routes a trunk-originated call to a treatment.

CMCFIOV

Register type
Peg

Description
Register Control of Multiple Call Forwarding Intragroup Overflow (CMCFIOV)

Register CMCFIOV counts the number of calls at the same time that the system does not forward in the customer group. The system does not forward call in the customer group because the number of calls exceeds the maximum limit set.

The maximum limit equals the total number of the customer group value and the base station value. The customer group value is field NCFI in table CUSTSTN. The base station value is field ANCFI in table KSETFEAT or IBNFEAT.

The operating company must enter the CMCF option in table CUSTSTN for this register to increase.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 when the system routes a line-originated call to a treatment.

The system generates TRK138 when the system routes a trunk-originated call to a treatment.

CUSPACT

Register type
Peg

Description
Register Call Forward Usage Sensitive Pricing Activation (CUSPACT)

Register CUSPACT records the number of successful activation sessions of Usage Sensitive CFW. When the system forwards the base station directory number (DN) to a selected remote station DN, a successful activation session occurs.

Note: Register CUSPACT only applies to the usage sensitive variant of call forwarding or UCFW. Register CUSPACT does not apply to the basic flat rate call forwarding feature.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CUSPFAIL

Register type
Peg

Description
Register Call Forward Usage Sensitive Pricing Failure (CUSPFAIL)

Register CUSPFAIL records the number of Usage Sensitive CFW activation sessions that fail. These sessions fail as a result of denial for each line of UCFW or feature conflicts.

Note: Register CUSPFAIL only applies to the usage sensitive variant of call forwarding or UCFW. Register CUSPFAIL does not apply to the basic flat rate call forwarding feature.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CUSPDEA

Register type
Peg

Description
Register Call Forward Usage Sensitive Pricing Deactivation (CUSPDEA)

Register CUSPDEA records the number of successful deactivation sessions of Usage Sensitive CFW. A successful deactivation session is a session that cancels call forwarding on the selected DN.

Note: Register CUSPDEA only applies to the usage sensitive variant of call forwarding or UCFW. Register CUSPDEA does not apply to the basic flat rate call forwarding feature.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CUSPOVR

Register type
Peg

Description
Register Call Forward Usage Sensitive Pricing Overload (CUSPOVR)

Register CUSPOVR records the number of Usage Sensitive CFW activation and deactivation requests that fail. These requests fail because the number of concurrent UCFW requests exceed the maximum.

Note: Register CUSPOVR only applies to the usage sensitive variant of call forwarding or UCFW. Register CUSPOVR does not apply to the basic flat rate call forwarding feature.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFTBATT

Register type
Peg

Description
Register Call Forward Timed for Call Forward Busy Attempts (CFTBATT)

Register CFTBATT measures the number of times that the CFTB feature attempts to route a call to treatment. This register counts the frequency that a customer group uses the feature.

Associated registers
Register CFTBFAIL counts the number of times the CFTB feature attempts to route a call to an announcement or a tone without successful completion. As a result, the CFTB leaves the call ringing.

Register ANNATT in OM group ANN counts attempts to connect to an announcement.

Register TONEATT in OM group TONES counts attempts to connect to a tone generator.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFTBFAIL

Register type
Peg

Description
Register Call Forward Timed for Call Forward Busy Failures (CFTBFAIL)

Register CFTBFAIL measures the number of times the CFTB feature attempts to route a call to treatment without successful completion. As a result, the CFTB feature leaves the call ringing. Register CFTBFAIL indicates that a problem is present in the entries for the CFTB treatment.

Associated registers
Register CFTBATT counts the number of times the CFTB feature attempts to route a call to either an announcement or a tone.

Register ANNATT in OM group ANN counts attempts to connect to an announcement.

Register TONEATT in OM group TONES counts attempts to connect to a tone generator.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFTDATT

Register type
Peg

Description
Register Call Forward Timed for Call Forward Don't Answer Attempts (CFTDATT)

Register CFTDATT measures the number of times the CFTD feature attempts to route a call to treatment. This register counts the number of times a customer group uses a feature.

Associated registers
Register CFTDFAIL counts the number of times the CFTD feature attempts to route a call to an announcement or a tone without successful completion. As a result, the CFTD leaves the call ringing.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFTDFAIL

Register type
Peg

Description
Register Call Forward Timed for Call Forward Don't Answer Failures (CFTDFAIL)

Register CFTDFAIL measures the number of times that the CFTD feature attempts to route a call to treatment without completion. As a result, the CFTD feature leaves the call ringing. This register indicates that a problem is present in the entries for the CFTD treatment.

Associated registers
Register CFTDATT counts the number of times the CFTD feature attempts to route a call to either an announcement or a tone.

Register ANNATT in OM group ANN counts attempts to connect to an announcement.

Register TONEATT in OM group TONES counts attempts to connect to a tone generator.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFDATTD

Register type
Peg

Description
Register Call Forward Don't Answer Attempt Data (CFDATTD)

Register CFDATTD measures the number of CFD attempts. The completion does not affect the measurement of attempts. This register is only pegged if the call type is CMD and CFD is active.

Option IECFD can be present with the CFD option on a CFD base terminal. Option IECFD allows the system to forward incoming internal and external calls to separate destinations. Option IECFD does not affect register CFDATTD. Option IECFD is not affected by this register.

Associated registers
There are no associated registers.

Extension registers
CFDATT2D

Associated logs
There are no associated logs.

CFBATTD

Register type
Peg

Description
Register Call Forward Busy Attempt Data (CFBATTD)

Register CFBATTD is a peg for CFB attempts. Call completion does not affect the peg of attempts. This register only increases if the call type is CMD and CFB is active.

Option IECFB can be present with option CFB on a CFB base terminal. Option IECFB allows the system to forward incoming internal and external calls to separate destinations. Option IECFB does not affect register CFBATTD. Option IECFB is not affected by this register.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFUATTD

Register type
Peg

Description
Register Call Forward Universal Attempt Data (CFUATTD)

Register CFUATTD pegs CFU attempts for CMD call types. This register measures the number of CFU attempts. Call completion does not affect the attempts. This register increases for each CFU, CFI, or CFF attempt.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFDXMPTD

Register type
Peg

Description
Register Call Forward Don't Answer Exempt Data (CFDXMPTD)

Register CFDXMPTD pegs for each CFD attempt that is not complete. This register measures the number of exempted CFD calls if the CFD base terminal has CDE or CDI and the call is restricted. The CDE and CDI are additional options and must be present with CFD on the CFD base terminal.

If a terminal has the CDE option, the terminal does not forward an intergroup-originated call. The CFDXMPTD register is pegged.

The system does not forward intragroup-originated calls if the terminal has CDI. The CFDXMPTD register is pegged.

This register increases only if CFD is active and the call type is CMD.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CFBXMPTD

Register type
Peg

Description
Register Call Forward Busy Exempt Data (CFBXMPTD)

Register CFBXMPTD pegs CBF attempts that are incomplete only if CFB is active and the call type is CMD. This register measures the number of exempted CFB calls if the CFB base terminal has CBE or CBI and the call is restricted. CBE and CBI are additional options and must be present with CFB on the CFB base terminal.

If a terminal has the CBE option, the terminal does not forward an intergroup-originated call. The CFBXMPTD register is pegged.

The system does not forward intragroup-originated calls if the terminal has CBI. The CFBXMPTD register is pegged.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CALLHOLD

Description

OM group Call Hold (CALLHOLD) provides information on incoming calls that are on hold.

The subscriber places calls on hold to:

- dial a third party
- talk to call waiting
- talk to a camped-on party

Only one call can be on hold at a time.

The following table lists the key and info fields associated with OM group CALLHOLD.

Key field	Info field
IBNG_INDEX. Key to CALLHOLD. Identifies a maximum of 4096 customer groups.	OMBINGINFO. Customer name as defined in field CUSTNAME in table CUSTHEAD.

The following office parameters must be set in table OFCENG:

- NO_OF_FTR_DATA_BLKS
- FTRQ2WAREAS
- NUMCPWAKE

Related functional groups

The Meridian Digital Centrex (MCD) functional group is associated with OM group CALLHOLD.

Registers

The following table lists the registers associated with OM group CALLHOLD and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CALLHOLD

Register name	Measures
CHDABDN	Call hold abandon
CHDATT	Call hold attempts
CHDFAIL	Call hold failures
CHDOVFL	Call hold overflow
CHDRBK	Call hold ring back

CHDABDN

Register type
Peg

Description
CHDABDN increases when the party on hold goes on-hook.

Associated registers
None

Extension registers
None

Associated logs
None

CHDATT

Register type
Peg

Description
CHDATT counts attempts to put a call on hold.

Associated registers
None

Extension registers
None

Associated logs
None

CHDFAIL

Register type
Peg

Description
CHDFAIL counts attempts to put a call on hold that fail because of feature restrictions.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CHDOVFL

Register type
Peg

Description
CHDOVFL counts attempts to put a call on hold that fail because enough software resources are not present.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CHDRBK

Register type
Peg

Description
CHDRBK increases when the held party calls back controller who goes on-hook.

Associated registers
None

Extension registers
None

Associated logs
None

CALLOG

Description

OM group Call Logging (CALLOG) records office-wide use of the CALLOG feature. The CALLOG record includes a record of lacking resources that result from use.

The following table lists the key and info fields associated with OM group CALLOG.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group CALLOG.

Registers

The following table lists the registers associated with OM group CALLOG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CALLOG

Register name	Measures
CALLACT	Call logging access

CALLACT

Register type
Peg

Description
CALLACT increases when a subscriber dials the call logging access code and accesses the call logging feature.

Associated registers
None

Extension registers
None

Associated logs
None

CALLRDT

Description

OM group Call Redirect (CALLRDT) uses the following registers to count actions that relate to the Call Redirect (CRT) feature:

- CRTACT
- CRTUACT
- CRTOPHUP

The following table lists the key and info fields associated with OM group CALLRDT.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group CALLRDT.

Registers

The following table lists the registers associated with OM group CALLRDT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CALLRDT

Register name	Measures
CRTACT	Call redirect activate
CRTUACT	Call redirect usage sensitive activate
CRTOPHUP	Call redirect other party hang up

CRTACT

Register type
Peg

Description
CRTACT counts the number of CRT activations. The register increments when a subscriber successfully activates the CRT feature during a two-party call. Register CRTACT pegs for both usage sensitive and line subscription activations.

Associated registers
None

Extension registers
None

Associated logs
None

CRTUACT

Register type
Peg

Description
CRTUACT counts the number of CRT pay-per-use activations. The register increments when a subscriber successfully activates the usage sensitive CRT feature during a two-party call.

Associated registers
None

Extension registers
None

Associated logs
None

CRTOPHUP

Register type
Peg

Description
CRTOPHUP counts the number of calling party disconnects. The register increments when the calling party disconnects after CRT activation but before the call reaches the routing DN.

Associated registers
None

Extension registers
None

Associated logs
None

CALLWAIT

Description

OM group Call Waiting (CALLWAIT) measures the use of the following options for both RES and IBN lines:

- Call Waiting (CWT)
- Call Waiting Originating (CWO)
- Meridian Business Set Camp-on (MBSCAMP)
- Call Waiting Exempt (CWX)
- Dial Call Waiting (CWD)
- Call Waiting Conference (CWTC)

When terminated to a busy line, the calling party hears a continuous ringing. The called party, who is already taking another call, hears a call waiting tone. The called party can acknowledge the calling party and place the current call on hold (and alternate between the calls). The called party can also abandon either of the calls.

Dial Call Waiting and Call Waiting Originating allow a calling party to use call waiting on a called party. Dial call waiting dials the call waiting feature-activation code and the called party's directory number to use call waiting. Call waiting originating permits a calling party to use permits a calling party to use CWT on a busy called party without dialing to activate the feature.

Feature MBSCAMP is a form of Call Waiting Originating that allows a Meridian Business Set used as an attendant console to camp on busy lines in the customer group.

Call waiting exempt exempts the called party from CWD, CWO, and MBSCAMP.

Cancel call waiting allows a calling party to prevent incoming calls from call waiting.

Registers CWTTATT, CCWGRANT, and DNYBYCCW apply to electronic business set (EBS) call waiting.

Call Waiting Conference provides conference functionality to CWT users by offering the capability to join a calling party into an existing call.

The following table lists the key and info fields associated with OM group CALLWAIT.

Key field	Info field
IBNG_INDEX. Key to CALLWAIT. This key identifies a maximum of 4095 customer groups.	OMIBNGINFO. Customer name as defined in field CUSTNAME in table CUSTHEAD.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies the number of feature data blocks required. Parameter NUMCPWAKE in table OFCENG, specifies the maximum number of call process wakeups.

Related functional groups

There are no functional groups associated with OM group CALLWAIT.

Registers

The following table lists the registers associated with OM group CALLWAIT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CALLWAIT (Sheet 1 of 2)

Register name	Measures
CCWGRANT	Cancel call waiting granted
CWDABDN	Call waiting dial abandon
CWDATT	Call waiting dial attempt
CWDEXMPT	Call waiting exempt
CWDFAIL	Call waiting dialed failures
CWOABDN	Call waiting originator abandon
CWOATT	Call waiting originator attempts
CWOEXMPT	Call waiting originator exempt
CWOFAIL	Call waiting originator failures
CWOOVFL	Call waiting originator overflow
CWRCL	Call waiting recalls

Registers for OM group CALLWAIT (Sheet 2 of 2)

Register name	Measures
CWTABDN	Call waiting abandon
CWTCATT	Call waiting conference attempt
CWTCCONF	Call waiting conference conference
CWTCINV	Call waiting conference invalid
CWTCPPU	Call waiting conference pay-per-use
CWTFAIL	Call waiting failure
CWTTATT	Call waiting originator attempts
CWTTOVFL	Call waiting terminator overflow
DNYBYCCW	Deny by cancel call waiting
MBSCABDN	Meridian Business Set camp on abandon
MBSCATT	Meridian Business Set camp on attempt
MBSCFAIL	Meridian Business Set camp on failed
MBSEXMPT	Meridian Business Set camp on exempt

CCWGRANT

Register type
Peg

Description
CCWGRANT counts successful attempts by members of a given customer group to inhibit call waiting. CCWGRANT counts the attempts to inhibit call waiting for the duration of a call.

This register also applies to electronic business sets with the CCW feature.

Associated registers
None

Extension registers
None

Associated logs
None

CWDABDN

Register type
Peg

Description
CWDABDN increases when the calling party abandons a call after the called party has heard the call waiting indicator tone.

Associated registers
None

Extension registers
None

Associated logs
None

CWDATT

Register type
Peg

Description
CWDATT counts attempts by the calling party to use call wait. The calling party dials the call waiting access code to use call wait.

Associated registers
None

Extension registers
None

Associated logs
None

CWDEXMPT

Register type
Peg

Description
CWDEXMPT counts attempts by the calling party to use call waiting. The calling party dials the access code to use call waiting. The attempt fails because the called party activated the call waiting exempt option.

Associated registers
None

Extension registers
None

Associated logs
Line138

CWDFAIL

Register type
Peg

Description
CWDFAIL counts failed attempts by the calling party to use call waiting. The calling party dials the access code to use call waiting. The attempts fail because of feature interactions.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CWOABDN

Register type
Peg

Description
CWOABDN increases when the calling party goes on-hook after the called party has heard the call waiting indicator tone.

Associated registers
None

Extension registers
None

Associated logs
None

CWOATT

Register type
Peg

Description
CWOATT counts attempts by the calling party to use call waiting.

Associated registers
None

Extension registers
None

Associated logs
None

CWOEXMPT

Register type
Peg

Description
CWOEXMPT counts failed attempts by the calling party to use call waiting. Attempts by the calling party fail because the called party has the call waiting exempt (CWX) option.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CWOFAIL

Register type
Peg

Description
CWOFAIL counts attempts by the calling party to use call waiting that fail because of feature interactions.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CWOOVFL

Register type
Peg

Description
CWOOVFL counts failed attempts by the calling party to use call waiting. These attempts fail as a result of a lack of insufficient software resources. The calling party use the call wait originator feature, or by dials the call wait access code to use call waiting.

Office parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies the number of required feature data blocks. Parameter NUMCPWAKE in table OFCENG specifies the maximum number of call process wake ups.

Associated registers
None

Extension registers
None

Associated logs
SWER

CWRCL

Register type
Peg

Description
CWRCL increases when a called party goes on-hook while a call is waiting, and the calling party is recalled.

Associated registers
None

Extension registers
None

Associated logs
None

CWTABDN

Register type
Peg

Description
CWTABDN increases when the calling party goes on-hook after notification that a call is waiting. The called party has the call waiting option.

Associated registers
None

Extension registers
None

Associated logs
None

CWTCATT

Register type
Peg

Description
CWTCATT increases when an attempt is made to activate the CWTC feature. The register increases when the end user presses 3 within the digit detection time period.

Associated registers
None

Extension registers
None

Associated logs
None

CWTCCONF

Register type
Peg

Description
CWTCCONF increases when a CWTC request results in a three-way conference.

Associated registers
None

Extension registers
None

Associated logs
None

CWTCINV

Register type
Peg

Description
CWTCINV counts invalid attempts to activate the CWTC feature. The register increases if the end user presses a digit different from 3.

Associated registers
None

Extension registers
None

Associated logs
None

CWTCPPU

Register type
Peg

Description
CWTCPPU counts pay-per-use successful attempts of the CWTC feature.

Associated registers
None

Extension registers
None

Associated logs
None

CWTFAIL

Register type
Peg

Description
CWTFAIL counts attempts to have calls wait that fail because of feature interactions. The called party has the call waiting option.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CWTTATT

Register type
Peg

Description
CWTTATT counts the attempts of a called party to use call waiting.

This register also applies to electronic business sets with the call waiting feature.

Associated registers
None

Extension registers
None

Associated logs
None

CWTTOVFL

Register type
Peg

Description
CWTTOVFL counts failed attempts by the called party to use call waiting. These attempts fail because of a lack of software resources.

Office parameter NO_FTR_DATA_BLKS in table OFCENG specifies the number of required feature data blocks. Parameter NUMCPWAKE in table OFCENG specifies the maximum number of call process wake ups.

Associated registers
None

Extension registers
None

Associated logs
SWER

DNYBYCCW

Register type
Peg

Description
DNYBYCCW counts denied attempts to use call waiting. The system denies these attempts because the CCW feature is active for the called party.

When the Call Waiting Auto-Suppression (CWAS) feature is activated, register DNYBYCCW also counts the number of termination attempts on a CWT-denied Secondary Directory Number (SDN).

This register also applies to electronic business sets with the CCW feature.

Associated registers
None

Extension registers
None

Associated logs
None

MBSCABDN

Register type
Peg

Description
MBSCABDN increases when a calling party transferred by a line with the MBSCAMP feature, goes on-hook. The calling party must go on-hook before the called party answers. Register MSBCABDN increases if the recall timer expires and the MBSCAMP line is rung again when the calling party goes on-hook.

This register also increases when the waiting party goes on-hook before the called party answers a call camped-on over IBN7.

Associated registers
None

Extension registers
None

Associated logs
None

MBSCATT

Register type
Peg

Description
MBSCATT increases when a subscriber attempts a Meridian Business Set camp on (MBSCAMP) call to a busy line.

This register increases when the system attempts a camp-on for a call over IBN7.

Associated registers
None

Extension registers
None

Associated logs
None

MBSCFAIL

Register type
Peg

Description
MBSCFAIL increases when an MBSCAMP attempt fails because of feature interactions. This register also increases when call attempts fail over IBN7 as a result of feature interactions.

Associated registers
None

Extension registers
None

Associated logs
None

MBSEXMPT

Register type
Peg

Description
MBSEXMPT increases when a subscriber attempts Meridian Business Set camp on (MBSCAMP) call to a line that has the call-waiting exempt (CWX) option.

This register increases when a camp-on over IBN7 fails because the called party has the call-waiting exempt (CWX) option.

Associated registers
None

Extension registers
None

Associated logs
None

CBK

Description

OM group Code Block (CBK) counts call attempts that are blocked or passed by the network management (NWM) CBK control. The group counts each call attempt made under NWM CBK.

Code controls allow the operating company to:

- limit traffic that enters the network from specified destination codes
- flag codes that are hard to reach
- study the level of traffic that is routed to specified destination codes.

The OM group CBK contains two peg registers: CBKCNT, and CBKPASS.

The following table lists the key and info fields associated with OM group CBK.

Key field	Info field
None	CBK_OMINFO has the following parts: CBKKEY, CBKANN, CBK_TYPE and CBKGAP_OR_PCT_LEVEL.

The CBKKEY has the following parts: CT, DR, and SNPA.

CT is the code type. The fixed CT for CBK are:

- CCODE (Country code)
- NAC (Non-area code)
- ACODE (Area code)
- PFX (Prefix digits)

The digit register (DR) is the called number code that calls are diverted from if the call comes from a specified serving numbering plan area (SNPA).

The SNPA or serving translation scheme (STS) is the area code of the serving office to which the control applies. If the control applies to all SNPA/STS served by the office, set the SNPA to ALL. If the code type is CCODE or PFX, the SNPA field does not apply. A field appears in the printout.

The CBKANN identifies the announcement to which blocked calls are to be routed. The fixed CBKANN for CBK are:

- NCA (No-circuit announcement)
- EA1 (Emergency announcement 1)
- EA2 (Emergency announcement 2)

Calls are normally routed to the NCA. When an extreme congestion condition occurs, the blocked calls can be routed to EA1 or EA2.

The CBK_TYPE is the type of CBK control used. The fixed CBK_TYPE for CBK are:

- PCT (Percentage)
- CAP (Call Gapping)

If the CBK_TYPE is GAP, CBKGAP_OR_PCT_LEVEL indicates the length of time between the calls that are complete. If CBK_TYPE is PCT, CBKGAP_OR_PCT_LEVEL indicates the percentage of calls to be blocked.

Related functional groups

There are no functional groups associated with OM group CBK.

Registers

The following table lists the registers associated with OM group CBK and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CBK

Register name	Measures
CBKCNT	Code block group count (CBKCNT)
CBKPASS	Code block group pass (CBKPASS)

CBKCNT

Register type
Peg

Description
Code block group count (CBKCNT) counts calls that are blocked by the NWM CBK control.

Associated registers
None

Extension registers
None

Associated logs
NWM200, NWM203

CBKPASS

Register type
Peg

Description
Code block group pass (CBKPASS) counts calls that are passed by the NWM CBK.

Associated registers
None

Extension registers
None

Associated logs
NWM110, NWM113

CCTOOM

Description

OM group Call Completion With Trunk Optimization-Canada only (CCTOOM) records the frequency of use of the CCTO feature. The following table lists the key and info fields associated with OM group CCTOOM-Canada only.

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with OM group CCTOOM-Canada only:

- ISUP
- CCS7

Registers

The following table lists the registers associated with OM group CCTOOM-Canada only and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CCTOOM-Canada only

Register name	Measures
CCTORCVD	CCTO requests received
CCTORQST	CCTO requested

CCTORCVD

Register type
Peg

Description
CCTORCVD counts the number of times a serving or intermediate switch receives a CCTO request.

Associated registers
None

Extension registers
None

Associated logs
None

CCTORQST

Register type
Peg

Description
CCTORQST counts the number of CCTO requests.

Associated registers
None

Extension registers
None

Associated logs
None

CDACTS

Description

OM group Customer Dialed Automatic Coin Toll Service (CDACTS) provides information about calls that can receive automatic coin toll service (ACTS). Calls may be routed to ACTS for the following reasons:

- initial coin charges
- coin charges due collection
- initial coin period notification
- nonstandard notification
- time and charges information

Registers count:

- unpaid coin phone calls
- calls that would receive ACTS but do not because the subscriber allows two successive timeouts to occur or flashes the switchhook

Registers also count unpaid coin phone calls, and calls that would receive ACTS but do not because the subscriber allows two successive timeouts to occur or flashes the switchhook.

ACTS replaces an operator with a digital recorded announcement machine (DRAM) and a coin detection circuit (CDC). On coin calls, the DRAM plays announcements to the subscriber indicating the amount of money that should be deposited. The CDC is connected to the calling party and counts the coins deposited by analyzing the dual frequency coin deposit tones that are generated by the coin phone. Once sufficient coinage has been deposited, a Thank You announcement is played and the called number is outpulsed. The subscriber can always reach the operator by flashing the switchhook or by allowing timeouts to occur.

ACTS can fully automate 1+ station paid calls under the following conditions:

- Calls that are to receive ACTS service must be made from ACTS-compatible coin phones. To be ACTS-compatible, a coin phone must be able to generate dual frequency coin deposit tones that the CDC can recognize.
- Automatic number identification (ANI) success is necessary for rating. If ANI failure does not occur on a coin call, then it is handled by an operator for initial contact. The call can be automatically handled by ACTS on subsequent contacts.

- Coin phones must have appropriately filled rate step tables.
- The call cannot have large charges, since coin station hoppers can handle only a limited number of coins. If the cost of a coin call exceeds a set amount, then the call is routed to an operator who can do intermediate collections.
- If a call is not billable (for example, a 1-800-type call), it is routed without receiving ACTS processing.
- A subscriber can request that a non-coin call receive a notification message after a specified period of time. In this case, a DRAM plays an announcement at the end of the specified interval.

The following table lists the key and info fields associated with OM group CDACTS.

Key field	Info field
None	None

Related functional groups

ACTS Automatic Coin Toll Service is associated with OM group CDACTS.

Registers

The following table lists the registers associated with OM group CDACTS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CDACTS (Sheet 1 of 2)

Register name	Measures
ACTSABN	Automatic coin toll service (ACTS) abandons
ACTSCHG	Automatic coin toll service (ACTS) charge
ACTSCNFY	Automatic coin toll service (ACTS) coin notify
ACTSFAIL	Automatic coin toll service (ACTS) failure
ACTSINI	Automatic coin toll service (ACTS) initial coin charges
ACTSNFY	Automatic coin toll service (ACTS) notify

Registers for OM group CDACTS (Sheet 2 of 2)

Register name	Measures
ACTSOPRI	Automatic coin toll service (ACTS) calls initially routed to operator
ACTSOPRR	ACTS calls that route to an operator on a recall
ACTSSUCC	Automatic coin toll service (ACTS) success
ACTSTAC	Automatic coin toll service (ACTS) time and charges
ACTSTEST	Automatic coin toll service (ACTS) coin tone generation test coin detection circuit (CDC) seizure
ACTSWALK	Automatic coin toll service (ACTS) walkaway

ACTSABN

Register type
Peg

Description
ACTSABN is incremented when a subscriber abandons a call while the call is connected to an initial DRAM message.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSCHG

Register type
Peg

Description
ACTSCHG is incremented when ACTS calls a coin phone because a subscriber has made a call for which charges are due.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSCNFY

Register type
Peg

Description
ACTSCNFY is incremented when ACTS calls a coin phone because the subscriber has requested a notification message.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSFAIL

Register type
Peg

Description
ACTSFAIL is incremented when a call cannot route to ACTS because a DRAM, CDC, or three-port conference circuit is not available.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSINI

Register type
Peg

Description
ACTSINI is incremented when a subscriber dials a 1+ call on a line equipped with ACTS.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSNFY

Register type
Peg

Description
ACTSNFY is incremented when ACTS calls a non-coin subscriber because the subscriber has requested a notification message.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSOPRI

Register type
Peg

Description
ACTSOPRI is incremented when a call is routed to an operator because of timeout or subscriber flash during the initial DRAM message.

This register is not incremented for calls that are routed to an operator because of hardware problems or unavailability of DRAM or coin receivers.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSOPRR

Register type
Peg

Description
ACTSOPRR is incremented when a call is routed to an operator because of timeout or subscriber flash, during a recall or during the notify DRAM message. This register is not incremented for calls that are routed to the operator because of hardware problems or unavailability of DRAM or coin receivers.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSSUCC

Register type
Peg

Description
ACTSSUCC is incremented when a subscriber successfully completes an ACTS call.

An increase in the value of this register means that the call was routed to a trunk, a tone, or an announcement.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSTAC

Register type
Peg

Description
ACTSTAC is incremented when a non-coin subscriber attempts to reach ACTS to receive time and charges information. Calls requiring treatments are routed to a TOPS operator.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSTEST

Register type
Peg

Description
ACTSTEST counts the number of times a coin detection circuit is seized for use in performing an ACTS coin tone generation test.

Associated registers
None

Extension registers
None

Associated logs
None

ACTSWALK

Register type
Peg

Description
ACTSWALK is incremented when a subscriber at a coin phone does not answer a call requesting charges due within 30 seconds. ACTS initiates a call to request charges due if the subscriber goes on hook during a call before a DRAM is connected and the announcement sequence is started.

Associated registers
None

Extension registers
None

Associated logs
None

CDCOM

Description

OM group Customer Data Change Operational Measurements (CDCOM) provides information on customer data change (CDC) users. CDCOM contains two registers that count:

- the number of times a CDC user logs on within a 24-hour period
- the total amount of time, in a 24-hour period, that a CDC user logs in

The following table lists the key and info fields associated with OM group CDCOM.

Key field	Info field
USER_NAMES	None

This feature requires the entry of a CDC user and owner in table CDCLOGON.

Related functional groups

There are no functional groups associated with OM group CDCOM.

Registers

The following table lists the registers associated with OM group CDCOM and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CDCOM

Register name	Measures
CDCLGCNT	Customer data change (CDC) login time
CDCUSAGE	Customer data change (CDC) login count

CDCLGCNT

Register type
Peg

Description
CDCLGCNT counts the total amount of the time, in a 24-hour period, that a CDC user remains logged in.

Associated registers
None

Extension registers
None

Associated logs
None

CDCUSAGE

Register type
Peg

Description
CDCUSAGE counts the total amount of the time, in a 24-hour period, that a CDC user logs in.

Associated registers
None

Extension registers
None

Associated logs
None

CDMCCS

Description

OM group Customer-dialed Mechanized Calling Card Service (CDMCCS) counts mechanized calling card service (MCCS) call attempts and failures caused by hardware problems with MCCS receivers (RCVRMCCS). Also counted are failures with the digital recorded announcement machine (DRAM). Registers in this group also count attempts to make MCCS sequence calls and queries sent to the billing validation database on sequence calls. Registers in this group also count sequence call failures caused by hardware problems with either MCCS receivers or DRAMs.

The following table lists the key and info fields associated with OM group CDMCCS.

Key field	Info field
None	None

Field SEQQRY in table INTCCFMT indicates if the system must send a query on each sequence call for the card issuer.

Office parameter MCCS_SEQ_QUERY in table OFCVAR indicates if the system must send a query on each sequence call for traditional 14-digit format calling cards. The parameter also indicates if the system must send a query on each sequence call for transitional CCITT format calling cards that are validated as 14-digit format.

Related functional groups

Mechanized Calling Card Service (MCCS) is associated with OM group CDMCCS.

Registers

The following table lists the registers associated with OM group CDMCCS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CDMCCS

Register name	Measures
MCCSABN	Abandoned subscriber-dialed mechanized calling card service (MCCS) calls
MCCSACBF	Account code billing call failures
MCCSACBS	Account code billing calls
MCCSATT	Subscriber-dialed mechanized calling card service (MCCS) call attempts
MCCSFAIL	Subscriber-dialed mechanized calling card service (MCCS) call failures
MCCSOPR	Subscriber-dialed mechanized calling card service (MCCS) calls that the system routes to an operator
MCCSSUCC	Successful subscriber-dialed mechanized calling card service (MCCS) calls
SEQATT	Subscriber-dialed mechanized calling card service (MCCS) sequence call attempts
SEQFAIL	Subscriber-dialed mechanized calling card service (MCCS) sequence call failures
SEQQRY	Subscriber-dialed mechanized calling card service (MCCS) sequence call database queries

MCCSABN

Register type
Peg

Description
MCCSABN increases when a subscriber abandons a MCCS call while call connects to the first DRAM message.

Associated registers
None

Extension registers
None

Associated logs
None

MCCSACBF

Register type
Peg

Description
MCCSACBF increases when the MCCS cannot complete an account code billing call. The system cannot complete the call because of an account code or an error condition the DMS switch detects.

Associated registers
None

Extension registers
None

Associated logs
None

MCCSACBS

Register type
Peg

Description
MCCSACBS increases when the MCCS completes an account code billing call.

Associated registers
None

Extension registers
None

Associated logs
None

MCCSATT

Register type
Peg

Description
MCCSATT increases when a subscriber dials a 0+ call on a line and receives MCCS. The value in this register includes 0+ calls the system routes over trunks that have MCCS. If hardware problems occur with either the DRAM or an MCCS receiver, the system routes the call to a traffic operator position system (TOPS) operator.

Associated registers
None

Extension registers
None

Associated logs
None

MCCSFAIL

Register type
Peg

Description
MCCSFAIL increases when subscriber-dialed MCCS calls fail. Failure occurs because of hardware problems with the digital recorded announcement machine (DRAM) or with an MCCS receiver. If a hardware problem occurs with the DRAM or an MCCS receiver, the system routes the call to a (TOPS) operator.

Associated registers
None

Extension registers
None

Associated logs
TRK106 CKT trkid (where trkid indicates the identification of the suspected trunk equipment)

MCCSOPR

Register type
Peg

Description
MCCSOPR increases when the system routes a call to an operator because of a timeout. Register MCCSOPR also increases because the subscriber flashes the switchhook.

Associated registers
None

Extension registers
None

Associated logs
None

MCCSSUCC

Register type
Peg

Description
MCCSSUCC increases when a subscriber successfully completes a credit card call.

Associated registers
None

Extension registers
None

Associated logs
None

SEQATT

Register type
Peg

Description
SEQATT counts subscriber-dialed MCCS sequence call attempts [that is, the number of times that the subscriber keys an octothorpe (#) after the called party disconnects].

If hardware problems occur with the DRAM or an MCCS receiver, the call receives dial tone.

Associated registers
None

Extension registers
None

Associated logs
None

SEQFAIL

Register type
Peg

Description
SEQFAIL counts failed subscriber-dialed MCCS sequence calls caused by hardware problems with the DRAM or an MCCS receiver. A dial tone returns if hardware problems occur with the DRAM or with an MCCS receiver.

Associated registers
None

Extension registers
None

Associated logs
TRK106 CKT trkid (where trkid indicates the identification of the suspected trunk equipment)

SEQQRY

Register type
Peg

Description
SEQQRY counts calling card validation queries the system sends to the billing validation database on sequence calls.

Associated registers
The following registers are associated with SEQQRY:

- ACCSCCV_CCVTOTAL, which counts queries sent to the calling card validation database
- DSMCCS_MCCSQRY, which counts MCCS queries sent to the billing validation center database

Extension registers
None

Associated logs
None

CEPTPW

Description

OM group CEPT Features Password (CEPTPW) measures the performance of the CEPTPW option that provides a unique password for a subscriber line. The password is valid for International Line Restriction (ILR) for International Business Network (IBN) lines, and Outgoing Call Barring (OCB) for Basic Rate Interface (BRI) lines. The subscriber can change the password by activating or programming the feature.

The following table lists the key and info fields associated with OM group CEPTPW. The group provides one tuple for each office.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group CEPTPW.

Registers

The following table lists the registers associated with OM group CEPTPW and what they measure. For a description of a register, click on the register name.

Registers for OM group CEPTPW (Sheet 1 of 2)

Register name	Measures
PWACT	CEPT feature password activation
PWUACT	CEPT feature password unsuccessful activation
PWCHG	CEPT feature password change
PWUCHG	CEPT feature password unsuccessful change
PWINTG	CEPT feature password interrogation
PWUINTG	CEPT feature password unsuccessful integration
PWLCK	CEPT feature password locked

Registers for OM group CEPTPW (Sheet 2 of 2)

Register name	Measures
PWUSG	CEPT feature password usage
PWCERR	CEPT feature password customer error

PWACT

Register type
Peg

Description
PWACT counts the number of successful attempts to activate the CEPTPW feature. The subscriber receives a confirmation tone when the activation request is accepted.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

PWUACT

Register type
Peg

Description
PWUACT counts the number of unsuccessful attempts to activate the CEPTPW. feature. The subscriber receives the negative acknowledgement (NACK) tone when the activation request is declined.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

PWCHG

Register type
Peg

Description
PWCHG counts the number of successful CEPTPW feature password changes. The subscriber receives a confirmation tone when the change is accepted.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

PWUCHG

Register type
Peg

Description
PWUCHG counts the number of unsuccessful attempts to change the CEPTPW feature password. The subscriber receives the NACK tone when the request is declined.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

PWINTG

Register type
Peg

Description
PWINTG counts the number of successful queries to verify the dialed CEPTPW feature password. The subscriber receives a special confirmation tone (SCT) or special information tone (SIT), depending on the status.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

PWUINTG

Register type
Peg

Description
PWUINTG counts the number of unsuccessful queries to verify that the dialed CEPTPW feature password. The subscriber receives a NACK tone when the request is declined.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

PWLCK

Register type
Peg

Description
PWLCK counts the number of times the subscriber locks the CEPTPW feature by dialing the wrong PIN more than the maximum sequential retry times allowed during activation, interrogation or programming. The maximum retry times (value range: 0 to 9) are defined in parameter

MAX_PIN_RETRY in table ISERVOPT. The value 0 allows an infinite number of PIN retries.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

PWUSG

Register type
Peg

Description
PWUSG counts the number of attempts to do one of the following actions:

- program password-related features ILR or OCB while CEPTPW is assigned to line features (by SERVORD)
- access CEPT features remotely by using the CEPTRA feature

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

PWCERR

Register type
Peg

Description
PWCERR counts the number of times a subscriber uses the CEPTPW feature incorrectly. The register increments when the subscriber makes the following errors:

- attempts to access CEPTPW when the feature is not assigned
- dials incorrectly when activating, programming or interrogating CEPTPW
- dials an incorrect password while activating or interrogating CEPTPW
- attempts to access CEPTPW when the feature is denied.

The subscriber receives a reorder (RODR) tone when the CEPTPW feature is not assigned on the line and the subscriber attempts to dial access codes.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

CEPTRA

Description

OM group CEPT Features Remote Access (CEPTRA) measures the performance of the CEPTRA feature option. The CEPTRA feature option allows activation, programming, deactivation or interrogation of CEPT features on end user's phone from a remote location.

CEPTRA controls the following CEPT functionalities of International Business Network (IBN) lines from remote agents:

- International Line Restriction (ILR)
- International Wake-Up (IWUC)
- Call Forwarding (CFU, CFB and CFDA)
- CEPT Features Password (CEPTPW)

The CEPTRA feature can be used from:

- a telephone residing on the same switch as the end user set
- a set outside the end user switch using a Direct Inward System Access (DISA) number

The following table lists the key and info fields associated with OM group CEPTRA. The group provides one tuple for each office.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group CEPTRA.

Registers

The following table lists the registers associated with OM group CEPTRA and what they measure. For a description of a register, click on the register name.

Registers for OM group CEPTRA (Sheet 1 of 2)

Register name	Measures
CPTRAATT	CEPT feature remote access attempt
CPTRAHOV	CEPT feature remote access hardware overflow

Registers for OM group CEPTRA (Sheet 2 of 2)

Register name	Measures
CPTRASOV	CEPT feature remote access software overflow
CPTRAFAL	CEPT feature remote access fail
CPTRASUC	CEPT feature remote access successful usage

CPTRAATT

Register type
Peg

Description
CPTRAATT counts the number of subscriber attempts to program a CEPT feature remotely by using the CEPTRA feature.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

CPTRAHOV

Register type
Peg

Description
CPTRAHOV counts the number of times a subscriber unsuccessfully attempts to program a CEPT feature remotely by using the CEPTRA feature, and the attempt fails because of a hardware failure.

For example, the universal tone receiver (UTR) could be unavailable. The subscriber receives a negative acknowledgement (NACK) tone when the request is denied.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

CPTRASOV

Register type
Peg

Description
CPTRASOV counts the number of subscriber attempts to program a CEPT feature remotely by using the CEPTRA feature, and a software failure occurs. For example, software resources could be insufficient.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

CPTRAFAL

Register type
Peg

Description
CPTRAFAL counts the number of times a subscriber uses the CEPTRA feature incorrectly. The register increments when the subscriber:

- attempts to access CEPTRA when the CEPTPW is not assigned
- dials incorrectly while entering the PIN and base DN
- dials the incorrect password for the base agent
- attempts to access CEPTRA when the feature is denied
- unsuccessfully programs a CEPT feature by using CEPTRA

The subscriber receives a reorder (RODR) tone when CEPTPW is not assigned on the line and the subscriber attempts to dial access codes.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
FTR138

CPTRASUC

Register type
Peg

Description
CPTRASUC counts the number of times a subscriber successfully programs a CEPT feature by using the CEPTRA feature.

This register applies only to DMS.

Associated registers
None

Extension registers
None

Associated logs
None

CF3P

Description

Lines that use the Three-way Calling (3WC) feature request three-port conference circuits (CF3P). Calls that go to service analysis positions after the activation of the position request three-port conference circuits. Trunk test positions request three-port conference circuits when a request to monitor talking is issued.

OM group CF3P provides information on the use of a three-port conference circuit. The information includes the number of times the system seized a circuit. The information also incudes the number of times that a circuit was not available. The information also includes the queue overflows and abandons.

Multiple usage registers monitor conference circuits in different busy states. Registers also monitor three-port conference circuits assigned to TOPS positions.

The USNBD feature uses the registers in OM group CF3P to monitor the usage of 3-way conference bridges used for combined CCRs.

The following table lists the key and info fields associated with OM group CF3P.

Key field	Info field
CONF_MEM_NUMBER This field indicates the number of software-equipped conference circuits in the office.	COMMON_LANGUAGE_NAME. This field contains the external identifier CF3P.

The OM group CF3P is available for non-TOPS environments and for TOPS offices with toll or combined local/toll capabilities. To obtain the correct OM outputs for TOPS offices with toll, you must set office parameter OFFICETYPE in table OFCSTD to OFF200TOPS. For combined local/toll with TOPS offices, you must set office parameter OFFICETYPE in table OFCSTD to OFF200TOPS, OFFCOMBTOPS, OFFEADAS, OFFCOMBITOPS or OFF500.

To detect the three-port conference use in a remote office, you must set the office parameter. You must set the office parameter OFFICETYPE in table OFCSTD to OFF200TOPS or OFFCOMBTOPS.

An office that uses three-port conference circuits to serve TOPS positions uses office parameter TOPS_THRESHOLD. Office parameter TOPS_THRESHOLD in table OFCENG gives the percentage of in-service three-port circuits reserved for TOPS use. The system translates this percentage into a number of circuits each time an audit of conference circuit data occurs. The office parameter AUDIT_INTERVAL in table OFCSTD defines the audit frequency.

Related functional groups

TOPS is associated with OM group CF3P.

Registers

The following table lists the registers associated with OM group CF3P and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CF3P (Sheet 1 of 2)

Register name	Measures
CNFMBU	CF3P manual busy usage
CNFMBUT	CF3P manual busy usage TOPS environment
CNFOVFL	CF3P overflows
CNFOVFLT	CF3P overflows TOPS environment
CNFQABAN	CF3P queue abandons
CNFQABNT	CF3P queue abandons TOPS environment
CNFQOCC	CF3P queue occupancy
CNFQOCCT	CF3P queue occupancy TOPS environment
CNFQOVFL	CF3P queue overflows
CNFQOVFT	CF3P queue overflows TOPS environment
CNFSBU	CF3P system busy usage
CNFSBUT	CF3P system busy usage TOPS environment
CNFSZRS	CF3P seizures
CNFSZRST	CF3P seizures TOPS environment

Registers for OM group CF3P (Sheet 2 of 2)

Register name	Measures
CNFTRU	CF3P traffic busy usage
CNFTRUT	CF3P traffic busy usage TOPS environment
TOPSOVFL	CF3P overflows by TOPS positions
TOPSTRU	CF3P TOPS traffic busy usage
TOPSZRS	CF3P seized by TOPS positions

CNFMBU

Register type
Usage

Scan rate
10 seconds

Description
CNFMBU records the number of conference circuits that are in any of the following states during the last OM transfer period:

- manual busy
- seized
- network management procedures

Maintenance personnel can seize a circuit for diagnostic tests while working from the trunk test position at the MAP terminal. Personnel also can be working by the automatic trunk test (ATT) system can seize a circuit for diagnostic tests. A system audit on the conference ports can also seize a circuit for diagnostic tests.

The system updates the active register every 10 seconds with the number of CF3Ps that are in any of the previously listed states. For example, if one conference port is manual busy, the active register increases by 1 every 10 seconds. The register will continue to increase for as long as the port is in this state. The register also increases if the system seizes one of the ports for a system audit. The system copies the accumulated count to the holding register (CNFMBU) every 30 minutes (and erases the previous value). If no ports are in these busy states, CNFMBU will show a value that is not zero. Values that are not zero will only appear if the system counted a port during the last OM transfer period (30 minutes).

Non-TOPS environments use this register.

Associated registers
None

Extension registers
None

Associated logs
None

CNFMBUT

Register type
Usage

Scan rate
10 seconds

Description
CF3P manual busy usage TOPS environment (CNFMBUT) records the number of conference circuits that are in any of the following states during the last OM transfer period:

- manual busy
- seized
- network management procedures

Maintenance personnel that work from the trunk test position at the MAP terminal can seize a circuit for diagnostic tests. The ATT system can also seize a circuit for diagnostic tests.

The system updates the active register every 10 seconds with the number of CF3Ps that are in any of the previously listed states. For example. if one conference port is manual busy, the active register increases by 1 every 10 seconds. The register will continue to increase for as long as the port is in this state. The system copies the accumulated count to the holding register (CNFMBUT) every 30 minutes, (and erases the previous value). CNFMBUT shows a value that is not zero if the system counted any port during the last OM transfer period of 30 minutes. CNFMBUT shows a value that is not zero while the ports are not in these busy states.

Associated registers
None

Extension registers
None

Associated logs
None

CNFOVFL

Register type
Peg

Description
CNFOVFL increases when the system can not satisfy a request for a three-port conference circuit immediately because conference circuits are busy.

Three way calling attempts fail and the system routes the calls to treatment. Service analysis and trunk test position requests attempt to queue.

The register applies to non-TOPS environments.

Associated registers
CNQOVFL

Validation formula
Number of calls that enter the queue = CNFOVFL - CNQOVFL

Extension registers
None

Associated logs
ATB100

CNFOVFLT

Register type
Peg

Description
CNFOVFLT counts requests for three-port conference circuits in a TOPS environment that the system can not satisfy immediately. The system can not satisfy the requests because all conference circuits are busy.

Three-way Calling attempts fail and the system routes the calls to a treatment. Service analysis and trunk test position requests attempt to queue.

Associated registers
CNQOVFL

Validation formula
Number of calls that enter the queue = CNFOVFLT - CNQOVFL

Extension registers
None

Associated logs
ATB100

CNFQABAN

Register type
Peg

Description
CNFQABAN counts circuit requests abandoned while the requests wait in the conference circuit queue.

The system uses this register in non-TOPS environments.

Associated registers
None

Extension registers
None

Associated logs
LINE104, LINE105, LINE109, LINE204

CNFQABNT

Register type
Peg

Description
CNFQABNT counts circuit requests abandoned while the requests wait in the conference circuit queue.

Associated registers
None

Extension registers
None

Associated logs
LINE104, LINE105, LINE109, LINE204

CNFQOCC

Register type
Usage

Scan rate
10 seconds

Description
The system scans conference circuits, and CNFQOCC records. The system scans if requests for a conference circuit are waiting in the queue. The queue consists of waiting service analysis and trunk test position requests only.

Associated registers
None

Extension registers
None

Associated logs
None

CNFQOCCT

Register type
Usage

Scan rate
10 seconds

Description
The system scans the conference circuits, and CNFQOCCT records. The system scans if requests for a conference circuit are waiting in the queue. The queue consists of waiting service analysis and trunk test position only.

Associated registers
None

Extension registers
None

Associated logs
None

CNFQOVFL

Register type
Peg

Description
CNFQOVFL counts attempts to enter the wait queue when the queue is full. Only requests from trunk test or service analysis positions increase this register. Other requests do not attempt to wait.

The system uses this register in non-TOPS environments.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CNFQOVFT

Register type
Peg

Description
CNFQOVFT counts attempts to enter the wait queue when the queue is full. Only requests from trunk test or service analysis positions increment this register, since other requests do not attempt to wait.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CNFSBU

Register type
Usage

Scan rate
10 seconds

Description
CNFSBU records if the conference circuits are remote busy, peripheral module busy, system busy, carrier failed, or unloaded. A conference request that originated in the system can place the conference circuits in these states.

The system uses this register in non-TOPS environments.

Associated registers
None

Extension registers
None

Associated logs
TRK106

CNFSBUT

Register type
Usage

Scan rate
10 seconds

Description
The system scans the conference circuits, and CNFSBUT records. The system scans if they are remote busy, peripheral module busy, system busy, carrier failed, or unloaded. A conference request that originated in the system can place these circuits in this state.

Associated registers
None

Extension registers
None

Associated logs
TRK106

CNFSZRS

Register type
Peg

Description
CNFSZRS increases when the system assigns a circuit in response to a request. The system assigns the circuit before an attempt to set up network paths to the three ports.

The system uses this register in non-TOPS environments.

Associated registers
None

Extension registers
None

Associated logs
None

CNFSZRST

Register type
Peg

Description
CNFSZRST increases when the system assigns a circuit in response to a request. The system assigns the circuit before an attempt to set up network paths to the three ports.

Associated registers
None

Extension registers
None

Associated logs
None

CNFTRU

Register type
Usage

Scan rate
10 seconds

Description
The system scans the conference circuits, and CNFTRU records if the circuits are call processing busy, unloaded, or locked out.

The system uses this register in non-TOPS environments.

Associated registers
None

Extension registers
None

Associated logs
None

CNFTRUT

Register type
Usage

Scan rate
10 seconds

Description
The system scans conference circuits, and CNFTRUT records if the circuits are call processing busy, deloaded, or locked out.

Associated registers
None

Extension registers
None

Associated logs
None

TOPSOVFL

Register type
Peg

Description
TOPSOVFL increases when a call that attempts to connect to a TOPS position cannot request a conference circuit. The request fails because circuits are not available for TOPS calls.

If this is the second attempt to obtain resources

- on an operator-initiated call, the operator does not observe a response and must re-initiate the call
- on a first operator-handled (that is, 0+, 0-, 1+ coin/hotel) call, the system routes the call to no service circuit (NOSC) treatment
- on a system-initiated recall, the system floats the call and does not use the recall indication.

Associated registers
None

Extension registers
None

Associated logs
None

TOPSTRU

Register type
Usage

Scan rate
10 seconds

Description
The system scans the conference circuits. Register TOPSTRU records if the system assigned the circuits to calls being served at a TOPS position in non-CAMA mode.

Associated registers
None

Extension registers
None

Associated logs
None

TOPSZRS

Register type
Peg

Description
TOPSZRS increases when the system assigns a three-port conference circuit to a call at a TOPS position. TOPSZRS increases when the

system assigns the circuit before any attempt to set up the required network paths. TOPSZRS can increase a second time for the same call. TOPSZRS increases again if the call fails on the first attempt to obtain all the required resources.

The CAMA ONI/RONI and ANIF calls to TOPS positions do not use a conference circuit.

Associated registers
None

Extension registers
None

Associated logs
None

CF6P

Description

OM group Six-port Conference Bridge Measurements (CF6P) provides information on the use of a six-port conference circuit.

Registers increase when:

- the system seizes a circuit
- the system makes a circuit not available
- a queue overflows
- the system abandons a queue

The following items request six-port conference circuits:

- lines that use the Six-way Conference (6WC) feature
- calls that go to service analysis positions after the activation of the position
- trunk test positions (TTP) when the user issues a request to monitor talking.

The following table lists the key and info fields associated with OM group CF6P.

Key field	Info field
COMMON_LANGUAGE_NAME	CONF6_OM_INFO

Related functional groups

There are no functional groups associated with CF6P.

Registers

The following table lists the registers associated with OM group CF6P and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CF6P (Sheet 1 of 2)

Register name	Measures
CF6MBU	CF6P manual busy usage
CF6OVFL	CF6P overflow

Registers for OM group CF6P (Sheet 2 of 2)

Register name	Measures
CF6QABAN	CF6P queue abandons
CF6QOCC	CF6P queue occupancy
CF6QOVFL	CF6P queue overflow
CF6SBU	CF6P system busy usage
CF6SZRS	CF6P seizures
CF6TRU	CF6P traffic busy usage

CF6MBU

Register type
Usage

Scan rate
10 seconds

Description
CF6MBU records the number of conference circuits in any of the following states during the last OM transfer period:

- manual busy
- seized
- busy (because of network management procedures (NWM))

The items in the following list can seize a circuit for diagnostic tests:

- maintenance personnel that work from a trunk test position at the MAP terminal
- the automatic trunk test (ATT) system
- a system audit on the conference ports.

The system updates the active register every 10 seconds with the number of CF6Ps that are in any of these states. If one conference port is manually busy, the register increases. The register also increases if the system seizes one of the ports for a system audit, The register increases by 1 every 10 seconds for as long as the port is in this state. The system copies the accumulated count to the holding register (CF6MBU) every 30 minutes (and erases the previous value). Register CF6MBU shows a value that is not zero if the system counts a port

during the last OM transfer period (30 minutes). Register CF6MBU displays this value when ports are not in busy states.

Associated registers
None

Extension registers
None

Associated logs
None

CF6OVFL

Register type
Peg

Description
CF6OVFL counts calls that cannot locate enough conference bridges.

Associated registers
None

Extension registers
None

Associated logs
ATB100

CF6QABAN

Register type
Peg

Description
CF6QABAN counts calls that abandon while waiting in queue for the system to connect the calls to a conference circuit.

Associated registers
None

Extension registers
None

Associated logs
LINE104, LINE105, LINE109, LINE204

CF6QOCC

Register type
Usage

Scan rate
10 seconds

Description
CF6QOCC records if requests are in queue for the system to assign a conference circuit. The queue consists of waiting service analysis and trunk test position requests only.

Associated registers
None

Extension registers
None

Associated logs
None

CF6QOVFL

Register type
Peg

Description
CF6QOVFL counts requests for a conference circuit that encounter a circuit queue full condition.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CF6SBU

Register type
Usage

Scan rate
10 seconds

Description
CF6SBU records if conference circuits are in one of the following states. The circuits are in this state as a result of a busying that originated in the system:

- remote busy
- peripheral module busy
- system busy
- carrier fail
- unloaded

Associated registers
None

Extension registers
None

Associated logs
TRK106

CF6SZRS

Register type
Peg

Description
CF6SZRS counts calls that seize a conference circuit.

Associated registers
None

Extension registers
None

Associated logs
None

CF6TRU

Register type
Usage

Scan rate
10 seconds

Description
CF6TRU records if conference circuits are in the following states:

- call processing busy
- call processing busy unload
- lockout

Associated registers
None

Extension registers
None

Associated logs
None

CFRA

Description

OM group Call Forward Remote Access (CFRA) measures the use of the call forward remote access (CFRA) feature and failures. Separate registers count attempts to use CFRA and failures caused by:

- not enough hardware resources
- not enough software resources
- missing entries
- subscriber dialing that is not correct

The following table lists the key and info fields associated with OM group CFRA.

Key field	Info field
None	None

Register CFRA_CFRALIMT uses the value in MAX_PROGRAMMERS in table OFCENG. MAX_PROGRAMMERS defines the number of users that can use CFRA at the same time.

Register CFRA_CFRASWOV depends on the no_of_ftr_data_blks office parameter in table OFCENG. Feature blocks are software resources required for CFRA to operate.

If table CUSTSTN and AUTHPART are not entered, CFRA will not operate and CFRAFAIL increases.

Related functional groups

The MDC CLASS CMS RES functional group increases with OM group CFRA.

Registers

The following table lists the registers associated with OM group CFRA and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CFRA

Register name	Measures
CFRADENY	Call forward remote access denied
CFRAFAIL	Call forward remote access failures
CFRAHWOV	Call forward remote access hardware resources overflow
CFRALIMT	Call forward remote access limit
CFRASWOV	Call forward remote access software resources overflow
CFRAATT	Call forward remote access attempts

CFRADENY

Register type
Peg

Description
CFRADENY counts the number of times the following conditions prevent the use of the (CFRA) feature:

- personal identification number (PIN) is not correct
- feature code is not correct
- forward to number is not correct; like 911, 0, or a number that does not translate.

Associated registers
None

Extension registers
None

Associated logs
None

CFRAFAIL

Register type
Peg

Description
CFRAFAIL counts the number of times the following events prevent access to the call forward remote access to the (CFRA) feature. The number of retries of directory number (DN), personal identification number (PIN), feature access code, or `forward' to numbers exceeds the maximum. Register CFRAFAIL also counts errors that the system cannot recover like missing entries for CUSTSTN or AUTHPART. The caller receives NACK treatment.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFRAHWOV

Register type
Peg

Description
CFRAHWOV counts the number of times not enough hardware resources prevents the use of the CFRA feature. The caller receives NOSR treatment.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFRALIMT

Register type
Peg

Description
CFRALIMT counts the number of times the CFRA feature cannot operate when the maximum number of subscribers use the CFRA feature.

The caller receives NOSR treatment. The system defines the number of concurrent users by office parameter MAX_PROGRAMMERS in table OFCENG.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFRASWOV

Register type
Peg

Description
CFRASWOV counts the number of times not enough software resources prevents the use of the CFRA. The caller receives NOSR treatment.

Office parameter NO_OF_FTR_DATA_BLKS in table OFCENG defines the feature data blocks available.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFRAATT

Register type
Peg

Description
CFRAATT counts the number of times a subscriber attempts to use the CFRA feature. To use the CFRA feature, the subscriber can dial a

direct inward system access (DISA) directory number with the CFRA option. The subscriber can dial the CFRA activation code to use the CFRA feature.

Associated registers
None

Extension registers
None

Associated logs
None

CFWPOTS

Description

OM group Call Forwarding in the POTS Environment (CFWPOTS) counts attempts and failures to activate the following features.

- Call Forwarding Fixed
- Call Forwarding Programmable
- Call Forwarding Usage Sensitive Pricing
- Call Forward Busy Line
- Call Forward Don't Answer

CFWPOTS registers monitor the following activities:

- feature use
- if there are enough extension blocks, HEAP store, or system resources
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain registers when subscribers do one of the following from an off-board application:
  - — query the status and/or programmed information of corresponding subscribed-to services
  - — generate a request to activate, deactivate or change the services

  For more information about the Off-board Service Control feature, refer to "*Advanced Intelligent Network Essentials Service Implementation Guide*", 297-5161-021, and the *"Advanced Intelligent Network Essentials Service Enablers"*, 297-5161-022.

  The Off-board Service Control feature applies only to DMS.

The following table lists the key and info fields associated with OM group CFWPOTS.

Key field	Info field
None	None

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies the number of feature data blocks required. Parameter NUMCPWAKE in table OFCENG, specifies the maximum number of call process wakeups.

Related functional groups

The POTS Call Forwarding feature is associated with OM group CFWPOTS.

Registers

The following table lists the registers associated with OM group CFWPOTS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CFWPOTS (Sheet 1 of 2)

Register name	Measures
CFBPATT	Call forward busy line attempts
CFBPDENY	Call forward busy line, denied
CFBPOVFL	Call forward busy line failure, lack of software resources
CFBPSOV	Call forward busy line failure, simultaneous limit exceeded
CFDPATT1	Call forward don't answer attempts
CFDPCNC1	Call forward don't answer, cancellations
CFDPDENY	Call forward don't answer, denied
CFDPFAIL	Call forward don't answer failure
CFDPOVFL	Call forward don't answer failure, lack of software resources
CFDPSOV	Call forward don't answer failure, simultaneous limit exceeded
CFPADENY	Call forwarding activation attempt failure, invalid number
CFPAOVFL	Call forwarding activation attempt failure, lack of software resources
CFPFDENY	Call forwarding attempt, denied
CFPFOVFL	Call forwarding attempt failure, lack of software resource
CFWPAATT	Call forwarding activation attempts

Registers for OM group CFWPOTS (Sheet 2 of 2)

Register name	Measures
CFWPFATT	Call forwarding attempts
CFWPSUC1	Call forwarding successful activation, first attempt
CFWPSUC2	Call forwarding successful activation, second attempt
CFWSOV	Call forwarding attempt failure, simultaneous limit exceeded

CFBPATT

Register type
Peg

Description
CFBPATT counts attempts to use the Call Forward Busy feature. A call qualifies for Call Forward Busy when the original agent is not a test facility, and when the call forwarding base station does not have the following line options:

- Denied Termination
- Suspended Service
- Remote Suspended Service line options

Associated registers
None

Extension registers
None

Associated logs
None

CFBPDENY

Register type
Peg

Description
CFBPDENY counts calls that the system denies when the calls attempt to use the Call Forward Busy feature.

The system denies operator verification calls, and calls that exceed the maximum call forwarding chain size when the system forwards the call.

A call qualifies for Call Forward Busy when the original agent is not a test facility, and when the call forwarding base station does not have the following line options:

- Denied Termination
- Suspended Service
- Remote Suspended Service

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFBPOVFL

Register type
Peg

Description
CFBPOVFL increases when the Call Forward Busy feature fails because the system cannot obtain a CFW_EXT_BLOCK or a CFZ_EXT_BLOCK. A call qualifies for Call Forward Busy when the original agent is not a test facility, and when the call forwarding base station does not have the following line options:

- Denied Termination
- Suspended Service
- Remote Suspended Service line options

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFBPSOV

Register type
Peg

Description
CFBPSOV counts attempts to use the Call Forward Busy feature that the system denies. Denial occurs because the call will exceed the maximum Call Forward Busy Line limit if the system forwards the call. The operating company enters the number of forwarded calls allowed in table CFW when the system assigns the Call Forward Busy line feature to a POTS line.

A call qualifies for Call Forward Busy when the originating agent is not a test facility, and when the call forwarding base station does not have the following line options:

- Denied Termination
- Suspended Service
- Remote Suspended Service line options

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFDPATT1

Register type
Peg

Description
CFDATT1 counts system attempts to terminate a call to a POTS line that has CFDA. Register CFDATT1 also counts attempts to activate the CFDA feature.

Associated registers
None

Extension registers
CFDPATT2

Associated logs
None

CFDPCNC1

Register type
Peg

Description
CFDPCNC1 counts cancellations of the Call Forward Don't Answer feature. Cancellations occur when the base station answers before Call Forward Don't Answer timeout.

Associated registers
None

Extension registers
None

Associated logs
None

CFDPDENY

Register type
Peg

Description
CFDPDENY counts calls denied when the calls attempt to use the Call Forward Don't Answer feature. The system denies operator verification calls. The system also denies calls if they exceed the maximum call forwarding chain size when the system forwards the call.

A call qualifies for Call Forward Don't Answer when the original agent is not a test facility, and when the call forwarding base station does not have the following line options:

- Denied Termination
- Suspended Service
- Remote Suspended Service line options

Associated registers
None

Extension registers
None

Associated logs
LINE138

CFDPFAIL

Register type
Peg

Description
CFDPFAIL increases when the system denies the Call Forward Don't Answer feature because the remote station is not idle. Denial can occur if remote station has the Denied Termination, Suspended Service or Remote Suspended Service line options.

Associated registers
None

Extension registers
None

Associated logs
None

CFDPOVFL

Register type
Peg

Description
CFDPOVFL increases when the Call Forward Don't Answer feature fails because the system does not have enough software resources.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CFDPSOV

Register type
Peg

Description
CFDPSOV counts attempts to use the Call Forward Don't Answer feature that the system denies because the call exceeds the maximum Call Forward Don't Answer simultaneous limit if the system forwards the call.

The operating company enters the number of simultaneous forwardings allowed when the system assigns the Call Forward Don't Answer feature to a POTS line.

Associated registers
None

Extension registers
None

Associated logs
None

CFPADENY

Register type
Peg

Description
CFPADENY counts directory numbers (DNs) that are not correct. The DNs are not correct as call forwarding DNs because the call is operator assisted or because the number has a minimum of two, or a maximum of four digits. CFPADENY applies to the Call Forwarding Programmable and Call Forwarding Usage Sensitive Pricing features only.

For DMS only: CFPADENY is pegged when an off-board service update attempt to set a forward to an DN fails validation.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CFPAOVFL

Register type
Peg

Description
CFPAOVFL increases when a call forwarding extension block is not available. CFPAOVFL also increases if not enough HEAP store reserved for the Call Forwarding feature are present.

CFPAOVFL applies to Call Forwarding Programmable and Call Forwarding Usage Sensitive Pricing features only.

For DMS only: CFPAOVFL is pegged when a software or data storage problem occurs with storing the forward to DN after it has been validated successfully (off-board service update failure).

Associated registers
None

Extension registers
None

Associated logs
LINE138

CFPFDENY

Register type
Peg

Description
CFPFDENY counts attempts to use the Call Forwarding feature that the system denies for one of the following reasons:

- the originator is a test facility
- the base station forwarded an operator verification call and receive another request to forward an operator verification call
- the forwarding directory number has Denied Termination, Suspended Service, or Remote Suspended Service
- the number of calls reach the maximum call forwarding chain size

CFPFDENY applies to the Call Forwarding Fixed, Call Forwarding Programmable, and Call Forwarding Usage Sensitive Pricing features.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFPFOVFL

Register type
Peg

Description
CFPFOVFL increases when a CFW_EXT_BLOCK or a CFZ_EXT_BLOCK is not available. CFPFOVFL applies to the Call Forwarding Fixed, Call Forwarding Programmable, and Call Forwarding Usage Sensitive Pricing features.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CFWPAATT

Register type
Peg

Description
CFWPAATT counts attempts to activate the Call Forwarding Fixed, Call Forwarding Programmable, and Call Forwarding Usage Sensitive Pricing features.

For DMS only: CFWPAATT pegs subscriber attempts to use an off-board service update request to activate POTS CFW.

Associated registers
None

Extension registers
None

Associated logs
CFW102

CFWPFATT

Register type
Peg

Description
CFWPFATT counts attempts to use the Call Forward feature. A call qualifies for call forwarding when the originating agent is not a test facility, and when the call forwarding base station does not have the following line options:

- Denied Termination
- Suspended Service
- Remote Suspended Service

CFWPFATT applies to the Call Forwarding Fixed, Call Forwarding Programmable, and Call Forwarding Usage Sensitive Pricing features.

Associated registers
None

Extension registers
None

Associated logs
None

CFWPSUC1

Register type
Peg

Description
CFWPSUC1 counts successful activations of the following features by a first activation attempt.

- Call Forwarding Fixed
- Call Forwarding Programmable
- Call Forwarding Usage Sensitive Pricing

For DMS only: CFWPSUC1 is pegged when a subscriber activates POTS DFW by using an off-board service update request.

Associated registers
CFWPSUC2 is pegged when the courtesy call is successful during POTS CFW programming and activation. *For DMS only:* CRWPSUC2 is not pegged by the off-board service update service because courtesy calls are not supported.

Extension registers
None

Associated logs
CFW100, CFW102, LINE138

CFWPSUC2

Register type
Peg

Description
CFWPSUC2 counts successful activations of the Call Forwarding Programmable and Call Forwarding Usage Sensitive Pricing features by a second activation attempt. A second activation attempt is an attempt to activate the features a second time to the same directory number. This attempt occurs in two minutes of the first attempt.

Associated registers
CFWPSUC1

Extension registers
None

Associated logs
CFW100, LINE138

CFWSOV

Register type
Peg

Description
CFWSOV counts attempts to use the Call Forward feature that the system denies. Denial occurs because the call exceeds the maximum Call Forwarding Fixed or Call Forwarding Programmable simultaneous limit. The call exceeds the simultaneous limit if the system forwards the call. The operating company enters the number of simultaneous forwards allowed in table CFW.

A call qualifies for Call Forwarding when the original agent is not a test facility, and when the call forwarding base station does not have the following line options:

- Denied Termination
- Suspended Service
- Remote Suspended Service

CFWSOV applies to the Call Forwarding Fixed and Call Forwarding Programmable features.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

CM

Description

OM group Computing Module (CM) provides information on the performance of the computing module (CM). The computing module is the control component of a DMS SuperNode switch. The CM performs call processing and maintenance functions. The computing module consists of the following duplicated central processing units (CPU), memory, message controllers (MC) and subsystem clocks (SSC).

CM registers count:

- manual and system requests for switches of activity (SWACT)
- SWACTs that a routine exercise test (REx) cause
- warm restarts that a system or manual action cause
- cold restarts that a system or manual action cause
- transient mismatches
- loss of sync that mismatch interrupts cause
- fault traps
- faults in the CPU, memory, or SSC
- aborted REx tests
- system busy MCs
- system-busy peripheral module controller (PMC) nodes or ports
- failed REx tests of a CPU, memory, LINK or PMC class
- failed SSC section of LINK class REx

CM has three usage registers that record which of the following reasons causes the CM to operate out-of-sync:

- manual or system action
- REx tests

The system uses data that the CM provides to assess the performance of the computing module. The system also uses the data to monitor fault interrupts and resource outages.

The following table lists the key and info fields associated with OM group CM.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group CM.

Registers

The following table lists the registers associated with OM group CM and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CM (Sheet 1 of 2)

Register name	Measures
CMCPUFLT	Computing module central processing unit faults
CMDPSYNC	Computing module dropped sync
CMMCINIT	Computing module manual cold initialization
CMMCSBSY	Computing module message controller system busy
CMMEMFLT	Computing module memory faults
CMMSMPXU	Computing module manual out-of-sync usage
CMMSWACT	Computing module manual switch of activity
CMMWINIT	Computing module manual warm initialization
CMRCPUFL	Computing module routine exercise test central processing unit class failure
CMREXFLT	Computing module routine exercise test fault
CMRLNKFL	Computing module link class routine exercise test failures
CMRMEMFL	Computing module routine exercise test MEM class failure

Registers for OM group CM (Sheet 2 of 2)

Register name	Measures
CMRPMCFL	Computing module routine exercise test PMC class peripheral module controller failures
CMRSMPXU	Computing module routine test out-of-sync usage.
CMRSWACT	Computing module routine exercise switch of activity
CMSCINIT	Computing module system cold initialization
CMSSCFLT	Computing module subsystem clock faults
CMSSMPXU	Computing module system out-of-sync usage
CMSSWACT	Computing module system switch of activity
CMSWINIT	Computing module system warm initialization
CMTRAP	Computing module trap
CMTRMISM	Computing module transient mismatches
PMCLKBSY	Peripheral module controller link system busy
PMCNDBSY	Peripheral module controller node system busy
CMRBASFL	Computing Module Routine Exercise BASE Class Fault
CMRFULFL	Computing Module Exercise FULL Class Fault

CMCPUFLT

Register type
Peg

Description
CMCPUFLT increases when the system deletes a fault in a CPU.

Associated registers
CMMEMFLT, CMSSCFLT, CMREXFLT

Extension registers
None

Associated logs
CM125

CMDPSYNC

Register type
Peg

Description
CMDPSYNC increases when the CM loses synchronization because of a mismatch interrupt. A mismatch interrupt occurs when one of the following occurs

- a fault mismatch
- 15 transient mismatches in one hour

Associated registers
CMTRMISM

Extension registers
None

Associated logs
MM101

CMMCINIT

Register type
Peg

Description
CMMCINIT increases when a manual request causes a cold restart of CM software and memory.

Associated registers
CMMWINIT, CMSCINIT, CMSWINIT

Extension registers
None

Associated logs
CM120

CMMCSBSY

Register type
Peg

Description
CMMCSBSY increases when makes a message controller (MC) system busy. This increase will occur because of faults or because both MC links are system busy.

CMMCSBSY increases when an MC changes state to system busy during the execution of a REx test.

Associated registers
None

Extension registers
None

Associated logs
CM104

CMMEMFLT

Register type
Peg

Description
CMMEMFLT counts memory faults in the CM that:

- affect a memory module or the complete memory card
- require system or manual interruption

The following cause memory faults:

- test failures
- defective store
- transient soft errors

Associated registers
CMCPUFLT, CMSSCFLT, CMREXFLT

Extension registers
None

Associated logs
CM112, CM113

CMMSMPXU

Register type
Usage

Scan rate
100 seconds

Description
CMMSMPXU records if the CM is out of sync (simplex mode) because of a manual request. The system places CM in simplex mode. To place the CM in a simplex mode, the system inputs the DPSYNC or IMAGE commands at the MAP terminal.

Associated registers
CMSSMPXU, CMRSMPXU

Extension registers
None

Associated logs
CM102, CM117

CMMSWACT

Register type
Peg

Description
CMMSWACT increases when a manual request causes a switch of activity (SWACT) in the CM.

The system initiates manual switches of activity when the system performs the following actions at the MAP terminal:

Associated register
CMSSWACT, CMRSWACT

Extension registers
None

Associated logs
CM101

CMMWINIT

Register type
Peg

Description
CMMWINIT increases when a manual request causes a warm restart of CM software and memory.

To produce a manual restart, the system inputs the restart command at the reset terminal interface (RTIF). To perform manual restart, you can also input non-menu commands at the command interpreter (CI) level.

Associated registers
CMSCINIT, CMSWINIT, CMMCINIT

Extension registers
None

Associated logs
CM120

CMRCPUFL

Register type
Peg

Description
The system increases CMRCPUFL when a system or manually activated CPU class REx test fails.

Scheduled REx tests run daily. The data that CMRCPUFL collects are meaningful only when accumulated over a period of a week or a month.

Associated registers
CMREXFLT, CMRMEMFL, CMRSSCFL, CMRMCFL, CMRPMCFL

Extension registers
None

Associated logs
CM122

CMREXFLT

Register type
Peg

Description
CMREXFLT increases when a system-activated CM REx test aborts because of one of the following:

- the system jams the mate CPU to the inactive state
- the mate CPU is already under test
- the CM is out-of-sync
- the system disables the REx test

The system does not increase CMREXFLT when a manually requested REx test aborts. REx tests run daily. The data that CMREXFLT collects are meaningful only when accumulated over a period of a week or a month.

Associated registers
CMRCPUFL, CMRMEMFL, CMRSSCFL, CMRMCFL, CMRPMCFL

Extension registers
None

Associated logs
CM122

CMRLNKFL

Register type
Peg

Description
CMRLNKFL counts failures of the link class (REx) test in the computing module of the DMS-core. The system can manually initiate this test with the RexTst command at the MAP terminal. The system can initiate the test according to a schedule set by the operating company. The link class REx test class includes the subsystem clock and message controller.

Associated registers
CMRSSCFL, CMRMCFL

Extension registers
None

Associated logs
CM122

CMRMEMFL

Register type
Peg

Description
The system increases CMRMEMFL when a system or manually activated CM MEM class REx test fails.

REx tests are scheduled to run daily. The data collected in CMRMEMFL is only meaningful when accumulated over a period of a week or a month.

Associated registers
CMREXFLT, CMRCPUFL, CMRSSCFL, CMRMCFL, CMRPMCFL

Extension registers
None

Associated logs
CM122

CMRPMCFL

Register type
Peg

Description
CMRPMCFL increases when a system or manually activated PMC class REx test fails.

Associated registers
CMREXFLT, CMRCPUFL, CMRSSCFL, CMRMCFL,CMRMEMFL

Extension registers
None

Associated logs
CM122

CMRSMPXU

Register type
Usage

Scan rate
100 seconds

Description
CMRSMPXU records if the computing module (CM) is out-of-sync because of errors or faults that a routine exercise (REx) test detected.

CMRSMPXU does not increase when the CM drops sync during a normal REx test.

Associated registers
CMSSMPXU, CMMSMPXU

Extension registers
None

Associated logs
CM102, CM121

CMRSWACT

Register type
Peg

Description
The system increases CMRSWACT when a REx test causes a switch of activity in the CM.

The REx test switches CPU activity daily to make sure that both sides of the CM hardware work. Three activity switches occur during a CM REx test.

Associated registers
CMMSWACT, CMSSWACT

Extension registers
None

Associated logs
CM101

CMSCINIT

Register type
Peg

Description
The system increases CMSCINIT when a system request causes a cold restart of CM software and memory.

The system initiates a cold restart if one of the following occurs:

- the system isolates the CM by closed MC links
- the system drops synchronization and must test the inactive CPU image
- a CPU is off-line and is about to receive activity
- a CPU sanity test fails after a mismatch interrupt occurs
- the system reached the allowed limit for warm restarts and the system requires a restart
- damage of the permanent store area
- the queues are defective

Associated registers
CMMWINIT, CMSWINIT, CMMCINIT

Extension registers
None

Associated logs
CM120

CMSSCFLT

Register type
Peg

Description
CMSSCFLT increases when a subsystem clock (SSC) fault is detected in the CM.

Associated registers
CMCPUFLT, CMMEMFLT, CMREXFLT

Extension registers
None

Associated logs
None

CMSSMPXU

Register type
Usage

Scan rate
100 seconds

Description
CMSSMPXU records if the CM is out of sync (simplex mode) because of a system action.

The system places the CM out-of-sync when:

- the system detects a mismatch defect
- the number of transient mismatches reaches the threshold

The CM remains out-of-sync until system or manual action completes.

Associated registers
CMMSMPXU, CMRSMPXU

Extension registers
None

Associated logs
CM102

CMSSWACT

Register type
Peg

Description
CMSSWACT increases when a system request causes a switch of activity (SWACT) in the CM. The SWACT preserves processor sanity after a mismatch interrupt occurs.

Associated registers
CMSSWACT, CMRSWACT

Extension registers
None

Associated logs
CM101, MM100

CMSWINIT

Register type
Peg

Description
The system increases CMSWINIT when a system request causes a warm restart of CM software and memory.

System-initiated warm restarts correct the following problems:

- software traps
- failure to create system processes
- death of system processes
- corrupt or insufficient store
- errors
- time-outs

Associated registers
CMMWINIT, CMSCINIT, CMMCINIT

Extension registers
None

Associated logs
CM120

CMTRAP

Register type
Peg

Description
CMTRAP counts trap interrupts in the CM. Trap interrupts occur when the system detects an error that causes a trap.

Associated registers
None

Extension registers
None

Associated logs
CM100, CM103, CM119

CMTRMISM

Register type
Peg

Description
CMTRMISM counts transient mismatches in the CM.

Transient mismatches occur when the system cannot isolate faults. These mismatches do not cause the CM to go out-of-sync unless 15 mismatches occur within one hour. When the system reaches this threshold, the CM goes out-of-sync until you correct the problem.

Associated registers
None

Extension registers
None

Associated logs
MM101

PMCLKBSY

Register type
Peg

Description
PMCLKBSY increases when the system makes a peripheral module controller (PMC) port system busy.

PMCLKBSY increases when the system makes a PMC port system busy during the execution of a REx test.

Associated registers
PMCNDBSY

Extension registers
None

Associated logs
CM137

PMCNDBSY

Register type
Peg

Description
PMCNDBSY increases when the system makes a peripheral module controller (PMC) node system busy.

PMCNDBSY does not increase when the system makes a PMC node system busy in a REx test.

Associated registers
PMCLKBSY

Extension registers
None

Associated logs
CM133

CMRBASFL

Register type
Peg

Description
CMRBASFL increases when a test fails within the BASE class.

The BASE class is a small group of tests that make sure the inactive processor is sane. Complete the test before the system moves the activity over to the mate. If a fault is present on the inactive plane, the system pegs a fault against the OM for each failed test.

Associated registers
None

Extension registers
None

Associated logs
None

CMRFULFL

Register type
Peg

Description
CMRFULFL increases when a test fails in the FULL class.

The FULL class encompasses the measure of REx tests that include CPU, MEM, LINK, PMC, and BASE. If any of these tests fail while the system executes a full class, faults will be individually pegged against this OM.

Associated registers
None

Extension registers
None

Associated logs
None

CMG

Description

OM group Call Management Group (CMG) monitors the use of CMG functionality. The following table lists the key and info fields associated with OM group CMG.

Key field	Info field
None	OMIBNGINFO This field is the customer group as defined in field CUSTNAME in table CUSTENG. The field can have only one customer name for each customer group (maximum 4095).

Related functional groups

There are no functional groups associated with OM group CMG.

Registers

The following table lists the registers associated with OM group CMG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CMG

Register name	Measures
ANSWATT	Answer attempt
BSYMNATT	Busy monitor attempt
HOLDATT	Hold attempt
RINGATT	Simultaneous ringing attempt

ANSWATT

Register type
Peg

Description
ANSWATT increases when a CMG member attempts to answer a call when simultaneous ringing is disabled.

Associated registers
None

Extension registers
None

Associated logs
None

BSYMNATT

Register type
Peg

Description
BSYMNATT increases when the switch attempts to monitor a busy CMG associate line.

Associated registers
None

Extension registers
None

Associated logs
None

HOLDATT

Register type
Peg

Description
HOLDATT increases when a CMG member attempts to place a call on hold.

Associated registers
None

Extension registers
None

Associated logs
None

RINGATT

Register type
Peg

Description
RINGATT increases when the switch attempts to apply simultaneous ringing to a CMG associate line.

Associated registers
None

Extension registers
None

Associated logs
None

CMI

Description

OM group Call Meter Inquiry (CMI) measures the performance and usage of CMI features. Software Optionality Control (SOC) SVBI0033 must be ON. The registers in CMI count events for the following features:

- *Last Call Meter Inquiry (LCMI)*
  LCMI allows the subscriber to dial a predefined number to an announcement that provides the meter count for the last call made. Only answered and feature calls (that is. subscriber activation, deactivation, interrogation calls and feature use) are included.

  If the last call meter count is zero, the announcement indicates that the last call was a free call. If the feature meter count is zero, the announcement does not indicate it.
- *Total Call Meter Inquiry (TCMI)*
  TCMI allows the subscriber to dial a predefined number to an announcement that provides the total meter count.

CMI services are supported for:

- IBN lines with the Fixed Price Service (FPS) and Metering Origination Group (MOG) options. The FPS applies to IBN lines only. In the total call meter announce for subscribers with FPS, instead of MOG, remaining credits, not the total of meters, is announced.
- ETSI BRI lines with the MOG option

CMI services can be used by subscribers who use hardware metering (that is, SPM and COIN) as well as software metering.

The following table lists the key and info fields associated with OM group CMI. The group contains multiple tuples for LCMI and TCMI.

Key field	Info field
CMI_OPTION {TCMI, LCMI}	None

Related functional groups

There are no functional groups associated with OM group CMI.

Registers

The following table lists the registers associated with OM group CMI and what they measure. For a description of a register, click on the register name.

Registers for OM group CMI

Register name	Measures
CMIATT	CMI attempts
CMIUSG	CMI usage
CMIOVFL	CMI overflow
CMICERR	CMI customer error

CMIATT

Register type
Peg

Description
CMIATT counts the number of attempts for LCMI/TCMI service to initiate. The register increments when the service is activated.

Associated registers
None

Extension registers
None

Associated logs
None

CMIUSG

Register type
Peg

Description
CMIUSG counts the number of times LCMI/TCMI service completes successfully. The register increments as soon as the announcement successfully starts.

Associated registers
None

Extension registers
None

Associated logs
None

CMIOVFL

Register type
Peg

Description
CMIOVFL counts the number of times LCMI/TCMI service does not successfully complete because of insufficient resources. The register increments when the announcement cannot be provided to the subscriber.

Associated registers
None

Extension registers
None

Associated logs
None

CMICERR

Register type
Peg

Description
CMICERR counts the number of times CMI service is not provided to the subscriber because either the service was initiated during an active call, or the subscriber is not allowed to use the service.

Associated registers
None

Extension registers
None

Associated logs
None

CMSGCARR

Description

OM group Call Messenger Carrier (CMSGCARR) monitors Call Messenger carrier-specific events. The following table lists the key and info fields associated with OM group CMG.

Key field	Info field
None	None

Related functional groups

MDS00001 Message Delivery System is associated with OM group CMSGCARR.

Registers

The following table lists the registers associated with OM group CMSGCARR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CMSGCARR

Register name	Measures
CMSGCRTE	Call messenger to toll recipients

CMSGCRTE

Register type
Peg

Description
CMSGCRTE represents the Call Messenger To Toll Recipients register.

Associated registers
None

Extension registers
None

Associated logs
None

CMSGGEN

Description

OM group Call Messenger General (CMSGGEN) monitors common Call Messenger events. The following table lists the key and info fields associated with OM group CMSGGEN.

Key field	Info field
None	None

Related functional groups

MDS00001 Message Delivery System is associated with OM group CMSGGEN.

Registers

The following table lists the registers associated with OM group CMSGGEN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CMSGGEN

Register name	Measures
CMSGATT	Call messenger successful attempts

CMSGATT

Register type
Peg

Description
CMSGATT counts Call Messenger successful attempts.

Associated registers
None

Extension registers
None

Associated logs
None

CNAB

Description

OM group Calling Name Delivery Blocking (CNAB) measures the activity of the CNAB feature for Residential Enhanced Services (RES and Meridian Digital Centrex (MDC) lines. The CNAB feature is the Caller ID Delivery and Suppression-Delivery (CIDSDLV) for Integrated Services Digital Network (ISDN) lines. The CNAB feature also uses this OM group. You can obtain the CNAB feature alone or as part of the universal access group of features.

CNAB also includes registers for the Calling Name and Number Delivery (CNND) feature.

The following table lists the key and info fields associated with OM group CNAB.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group CNAB.

Registers

The following table lists the registers associated with OM group CNAB and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CNAB (Sheet 1 of 2)

Register name	Measures
CNABATT	CNAB attempts
CNABDENY	CNAB denial
CNABFDEN	CNAB feature access denied
CNABSACT	CNAB successful activations
CNABUNIV	CNAB universal

Registers for OM group CNAB (Sheet 2 of 2)

Register name	Measures
CNNDDENY	CNND denial
CNNDSDEL	CNND successful delivery

CNABATT

Register type
Peg

Description
CNABATT counts the number of times the CNAB or CNND feature access code is dialed. This count includes successful and unsuccessful attempts to activate the feature.

Associated registers
None

Extension registers
None

Associated logs
None

CNABDENY

Register type
Peg

Description
CNABDENY counts the number of CNAB common attempts denied because the SO option DENYCNAB is in effect. ISDN lines do not use this register.

Associated registers
CNABFDEN

Extension registers
None

Associated logs
None

CNABFDEN

Register type
Peg

Description
CNABFDEN increases when the system denies CNAB or CNND feature activation for any of the following reasons:

- the CNAB line option (or the CIDSDLV option for ISDN subscribers) is not assigned to the subscriber
- the CNAB (or CNDB for ISDN) customer group option is not assigned to the subscriber
- the system denies a universal access attempt because the corresponding SO option DENY is on the line. This line does not apply to ISDN.
- CNDB is not enabled for the office and the subscriber has the CIDSDLV line option
- the CNAB line option is assigned but is not enabled for the office

Associated registers
None

Extension registers
None

Associated logs
None

CNABSACT

Register type
Peg

Description
CNABSACT increases when the system correctly activates the CNAB or CNND feature. Register CNABSACT increases when a subscriber with an unsuppressed default name status is successful in suppressing the name through CNAB activation. Register CNABSACT also increases when a subscriber with a suppressed name status activates CNAB. The activation of CNAB unsuppresses the name for the call.

This register also increases when an ISDN subscriber activates CIDSDLV with an access code.

Associated registers
None

Extension registers
None

Associated logs
None

CNABUNIV

Register type
Peg

Description
CNABUNIV counts the number of common access attempts for the CNAB, CNND, and CIDSDLV features.

Associated registers
CNABATT

Extension registers
None

Associated logs
None

CNNDDENY

Register type
Usage

Description
CNNDDENY counts the number of CNND common access attempts the system denies because the SO option DENYCNND is in effect.

Associated registers
CNABFDEN

Extension registers
None

Associated logs
None

CNNDSDEL

Register type
Peg

Description
CNNDSDEL counts the times the name or number or both are delivered. The delivery occurs after the system activates CNND or CIDSDLV for an intranodal call to a terminator with CLASS number delivery.

CNNDSDEL increases when an ISDN subscriber activates CIDSDLV under these conditions.

Associated registers
None

Extension registers
None

Associated logs
None

CNAMD

Description

OM group Calling Name Delivery (CNAMD) measures the display activity for the CNAMD feature for both intra- and inter-switched calls. This also includes times the following events occur:

- the system transmits the name to customer premises equipment (CPE)
- the name and number are delivered to CPE
- the system sends the Private indication for the calling name to CPE
- the system sends an Out-of-Area indication for the calling name to CPE
- transaction-capabilities application part (TCAP) name queries are launched toward a name database for Residential Enhanced Services (RES) lines
- TCAP timeouts occur when the switch is waiting for a response from the name database
- a query was not launched because TransactionID (TRID) was not available
- the system blocks a query by an active automatic call gapping (ACG) six-digit code control
- the service control point (SCP) requests that the system apply an ACG six-digit code control, but the request is not completed because the code control table is full
- Integrated services digital network (ISDN) user part (ISUP) query timeouts occur when the switch is waiting for a response from the originating switch (for proprietary name design only)

The following table lists the key and info fields associated with OM group CNAMD.

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with OM group CNAMD:

- CLASS Call Management Services (CMS)
- RES Meridian Digital Centrex (MDC)—for proprietary CNAMD only
- ISDN basic rate interface (BRI)

Registers

The following table lists the registers associated with OM group CNAMD and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CNAMD

Register name	Measures
CNAMDEL	Calling name delivered
CNAMODEL	Calling name out-of-area delivered
CNAMPDEL	Calling name privacy indicator delivered
NAMACGBK	Name TCAP queries blocked by ACG
NAMACGOV	Name ACG table overflow
NAMISPTO	Name ISUP query timeouts
NAMTCPQ	Calling name TCAP queries sent
NAMTCPTO	Name TCAP query timeouts
NANUMDEL	Calling name and number delivered
TRIDUAVL	Transaction ID unavailable
LOCLKUP	Local lookup

CNAMDEL

Register type
Peg

Description
CNAMDEL increased every time the system delivers the calling name to a CNAMD subscriber.

Associated registers
None

Extension registers
CNAMDEL2

Associated logs
None

CNAMODEL

Register type
Peg

Description
CNAMODEL increases every time the calling name is unavailable. Also, the system has to send the Out-of-Area name indication (O) to the subscriber's customer premises equipment.

Associated registers
None

Extension registers
None

Associated logs
None

CNAMPDEL

Register type
Peg

Description
CNAMPDEL increases every time the system determines the calling name to be private. The system also has to determine whether to send the private name indication (P) to the subscriber's customer premises equipment.

Associated registers
None

Extension registers
None

Associated logs
None

NAMACGBK

Register type
Peg

Description
NAMACGBK increases every time the system blocks a calling TCAP query because of an active ACG6-digit code control.

Associated registers
None

Extension registers
None

Associated logs
None

NAMACGOV

Register type
Peg

Description
NAMACGOV increases when the SCP requests that the system apply an ACG 6-digit code control. However, the system can not apply the code control due to the code control table being full.

Associated registers
None

Extension registers
None

Associated logs
None

NAMISPTO

Register type
Peg

Description
NAMISPTO increases every time a calling name ISDN user part (ISUP) query is initiated. Also, the TNAME timer has to expire before the ISUP Pass Along Message is received. The expiry delay is an ISUP timeout condition.

Associated registers
None

Extension registers
None

Associated logs
None

NAMTCPQ

Register type
Peg

Description
NAMTCPQ increases each time the system initiates a calling name TCAP query.

Associated registers
None

Extension registers
NAMTCPQ2

Associated logs
None

NAMTCPTO

Register type
Peg

Description
NAMTCPTO increases every time the system initiates a calling name TCAP query. The condition is that the TNAME timer expires before the TCAP response package is received. This is a TCAP timeout condition.

Associated registers
None

Extension registers
None

Associated logs
None

NANUMDEL

Register type
Peg

Description
NANUMDEL increases every time the calling name is available. The system has to send the name with a calling number or indicator to the subscriber's customer premises equipment.

Associated registers
The following registers are associated with NAMUMDEL:

- CNAMDEL
- CNDDNDEL, CNDPDEL, CNDODEL, DDNDEL (in group CND)

Extension registers
None

Associated logs
None

TRIDUAVL

Register type
Peg

Description
TRIDUAVL increases every time the system can not initiate a calling name TCAP query because a transaction ID is not available.

Associated registers
None

Extension registers
None

Associated logs
None

LOCLKUP

Register type
Peg

Description
LOCLKUP is pegged each time a TCAP name query is saved by using a local name lookup. This register is pegged as a line is allocated and a TCAP name query is not launched due to the local lookup activity.

Associated registers
NAMTCPQ

Validation formula
NAMTCPQ + LOCLKUP = the total number of TCAP name queries saved

Extension registers
None

Associated logs
None

CND

Description

OM group Calling Number Delivery (CND) provides information on the office-wide use of Custom Local Area Signaling Service (CLASS) display features. These features include: Dialable Directory Number (DDN), Calling Number Delivery (CND), Calling Name Delivery (CNAMD), and Redirecting Number and Reason Delivery (RND). This OM applies to Residential Enhanced Services (RES), Meridian Digital Centrex (MDC), and Integrated Services Digital Network (ISDN) lines.

CND registers count the following events:

- attempts to activate and deactivate CND, CNAMD, and RND subscriber usage-sensitive pricing (SUSP)
- attempts to access a feature that are denied because the feature is not available
- attempts to access a feature that are denied because of software shortage
- calling numbers delivered
- calling numbers that are private or outside area
- calling numbers that the system cannot deliver because CLASS modem resource (CMR) cards are not available
- DDNs delivered
- failures to deliver DNs because a DN is not available, the calling number is not unique, or the number of digits is not correct
- long-distance indicators (LDI) delivered
- failure to deliver the LDI message because no room is present in the multiple data message
- all spontaneous call-waiting identification (SCWID) data delivered for call waiting
- all activation codes that attempt to activate cancel SCWID (CSCWID) for the current call
- the number of calls not allowed to display because the controller activated CSCWID before originating the current call

The OM group CND applies to feature use on remote carrier SLC-96 (RCS) and remote digital terminal (RDT) lines.

The OM group CND can use either single data message or multiple data message format. Single data messages contain time, date, and

ten-digit calling DN information. DDN requires multiple data message format. Multiple data messages contain the following elements:

- a time parameter that includes time and date
- a calling line identification (CLID) parameter that is a ten-digit DN
- a dialable DN parameter that contains a 1- to 11-digit dialable form of the number of the calling party
- a reason for the absence of calling information parameter that is either O (not available) or P (private)
- the number of times the system sends the coin telephone indicator ‘C’ to the subscriber
- the number of times the system sends the service interaction indicator ‘S’ to the subscriber
- a call qualifier parameter (L), which indicates that the call is a long-distance call

If the dialable form of the calling number is not 1 to 11 digits, the system sends the 10-digit DN in the CLID parameter of the multiple data message. The CLID parameter is sent if the system cannot deliver a DDN to a DDN subscriber because of the following reasons:

- information is not available
- the calling number is not unique

The CLASS LDI feature provides call qualification information to the subscriber premises equipment of the called party for incoming long-distance calls.

The following table lists the key and info fields associated with OM group CND.

Key field	Info field
None	None

Field SUSP in table AMAOPTS is set to ON for lines with CND SUSP for registers CNDACT and CNDDACT to increase. CND SUSP activation and release codes are defined in table IBNXLA.

CMR cards must be present in extended multiprocessor system (XMS)-based peripheral modules (XPM) and entered in table LTCINV or RCCINV for CND to work. The OM group CND register CNDUNAVL counts CND attempts if the cards are not in XMS-XPM and correctly data entered.

Reverse translations for DDN must be entered in tables DNREGION, DNREVXLA, and CUSTNTWK.

Related functional groups

The CLASS/CMS RES functional groups are associated with functional groups for OM group CND.

Registers

The following table lists the registers associated with OM group CND and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CND (Sheet 1 of 2)

Register name	Measures
CNDACT	CND SUSP activation
CNDCDEL	CND coin phone delivery
CNDDACT	CND SUSP release
CNDDNDEL	CND DN delivery
CNDFDNA	CND SUSP feature denial on activation
CNDFDND	CND SUSP feature denial on release
CNDODEL	CND outside area number delivery
CNDOVFL	CND SUSP overflow
CNDPDEL	CND private number delivery
CNDSDEL	CND service interaction delivery
CNDUNAVL	CND unavailable
CNMDEL	Calling name delivered
CNMDODEL	Calling name out-of-area indication delivered
CNMDPDEL	Calling name private indication delivered
CNMNDEL	Calling name and number delivered
CNMUNAVL	Calling name unavailable

Registers for OM group CND (Sheet 2 of 2)

Register name	Measures
CSCWDACT	Cancel spontaneous call waiting identification (CSCWID) activation attempt
DDNDEL	DDN delivery
DDNNUNIQ	DDN non-unique
DDNTRUNC	DDN truncated
DDNUNAVL	DDN unavailable
LDIDEL--Canada only	LDI delivered
LDIOVFL--Canada only	LDI overflow
NNDUNAVL	Network name delivery unavailable
SCWDNYDS	SCWID denied display by cancel SCWID (CSCWID)
SCWIDDEL	CWID data delivered

CNDACT

Register type
Peg

Description
CNDACT increases when a subscriber dials the activation code for CLASS SUSP display features. A count in the register does not mean that the display feature was correctly activated.

Associated registers
None

Extension registers
None

Associated logs
None

CNDCDEL

Register type
Peg

Description
CNDCDEL increases when the DMS-100 does not send the CND as a result of a call from a coin telephone. The DMS-100 sends the indicator ‘C’ to the subscriber.

Associated registers
None

Extension registers
CNDCDEL2

Associated logs
None

CNDDACT

Register type
Peg

Description
CNDDACT increases when a subscriber dials the deactivation code for CLASS SUSP display features. A count in the register does not mean that the display was deactivated.

Associated registers
None

Extension registers
None

Associated logs
None

CNDDNDEL

Register type
Peg

Description
CNDDNDEL increases for CLASS lines when the system delivers a ten-digit DN as one of the following:

- a calling number in a single data CND message
- the CLID parameter in a multiple data message

CNDDNDEL does not include P (private) or O (not available) delivered as a calling number. The register increases once for each calling number that CND delivers to ISDN sets.

Associated registers
CNDPDEL, CNDODEL, DDNUNAVL, DDNNUNIQ, DDNTRUNC

Extension registers
CNDDDEL2

Associated logs
AMAB117

CNDFDNA

Register type
Peg

Description
CNDFDNA increases when a subscriber dials the activation code for CND SUSP but the system denies access. The system denies access if the CLASS or ISDN display feature is not available on the line. The system also denies access if the CLASS display feature is not activated for the office in table RESOFC. The system routes the call to feature not allowed (FNAL) treatment.

The system routes the call to negative acknowledgment (NACK) treatment if CND SUSP cannot be accessed because of one of the following reasons:

- denied termination
- the multiple appearance directory number (MADN) option is on the line

Associated registers
None

Extension registers
None

Associated logs
LINE138

CNDFDND

Register type
Peg

Description
CNDFDND increases when a subscriber dials the release code for CND SUSP but the system denies access. The system denies access if the following occur:

- the CLASS or ISDN display feature is not available on the line
- if the CLASS display feature is not activated for the office in table RESOFC

The system routes the call to feature not allowed (FNAL) treatment. If CND SUSP is not accessed because the denied termination or MADN options are on the line, the call is routed to negative NACK treatment.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CNDODEL

Register type
Peg

Description
CNDODEL increases when the calling information delivered to a subscriber is O (for outside area) in a single data message. This register also increases when O appears in parameter REASON_FOR_ABSENCE_OF_DN in a multiple data message. If multiple data messaging is used, the called party is outside the area defined for CND.

CNDODEL increases when the calling number is out-of-area for ISDN sets assigned the CND feature. The ISDN set displays outside call for both not known and private calls.

Associated registers
None

Extension registers
CNDODEL2

Associated logs
AMAB117

CNDOVFL

Register type
Peg

Description
CNDOVFL is incremented when a CLASS or ISDN CND SUSP display feature cannot be activated or deactivated because of insufficient software resources. The call is routed to no software resources (NOSR) treatment. CNDOVFL is not incremented on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CNDPDEL

Register type
Peg

Description
CNDPDEL increases when a private (P) message delivers to a subscriber. The register also increases when P appears in parameter REASON_FOR_ABSENCE_OF_DN in a multiple data message. When the register increases, the called party has the Calling Number Delivery Blocking (CNDB) feature.

CNDPDEL increases when the calling number is private when the system assigns CND to an ISDN set. The system sends an out-of-area indication to the customer premises equipment (CPE).

Note: The CND feature for ISDN only supplies out-of-area indication to the CPE. The OM counts for private and out-of-area names increase correctly.

Associated registers
None

Extension registers
CNDPDEL2

Associated logs
AMAB117

CNDSDEL

Register type
Peg

Description
CNDSDEL increases when the DMS-100 does not send the CND as a result of a service interaction. The DMS-100 sends the indicator ‘S’ to the subscriber.

Associated registers
None

Extension registers
CNDSDEL2

Associated logs
None

CNDUNAVL

Register type
Peg

Description
CNDUNAVL increases when the system does not deliver calling information because a CLASS Modem Resource (CMR) card is not available. The register does not apply to ISDN sets because ISDN does not use the CMR.

CMR cards are required for successful operation of CLASS display features. The cards are entered in table LTCINV or RCCINV for the peripheral module which supports a line with CLASS display features.

Associated registers
None

Extension registers
None

Associated logs
None

CNMDEL

Register type
Peg

Description
CNMDEL set to zero. The register is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
CNMDEL2

Associated logs
None

CNMDODEL

Register type
Peg

Description
CNMDODEL is zeroed. The register is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
None

CNMDPDEL

Register type
Peg

Description
CNMDPDEL is set to zero.

Associated registers
None

Extension registers
None

Associated logs
None

CNMNDEL

Register type
Peg

Description
CNMNDEL is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
CNMNDEL2

Associated logs
None

CNMUNAVL

Register type
Peg

Description
CNMUNAVL is set to zero. The register is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
CNMUNAV2

Associated logs
None

CSCWDACT

Register type
Peg

Description
CSCWDACT increases when a subscriber dials the code that activates CSCWID for the current call. The register does not apply to ISDN sets and is not supported on the DMS-100G switch.

Associated registers
SCWDNYDS

Extension registers
None

Associated logs
None

DDNDEL

Register type
Peg

Description
DDNDEL increases when the system delivers calling information in a dialable format. The register does not apply to ISDN sets.

Associated registers
CNDDNDEL

Extension registers
DDNDEL2

Associated logs
None

DDNNUNIQ

Register type
Peg

Description
DDNNUNIQ increases when the calling number the system delivers to a DDN subscriber is not different.

An example of a non-unique calling number is a line with teen service, also known as secondary directory number. The system delivers the ten-digit DN in the CLID parameter to the DDN subscriber (instead of the DDN parameter).

DDNNUNIQ does not apply to ISDN sets and is not supported on the DMS-100G switch.

Associated registers
CNDDNDEL

Extension registers
None

Associated logs
None

DDNTRUNC

Register type
Peg

Description
DDNTRUNC increases when the reverse translations for a calling number delivered to a DDN subscriber are:

- more than 24 digits long
- less than 1 digit long

The system delivers the 10-digit DN in the CLID parameter to the DDN subscriber instead of the DDN parameter. Reverse translations for DDN are entered in tables DNREGION, DNREVXLA, and CUSTNTWK. DDNTRUNC does not apply to ISDN sets.

Associated registers
CNDDNDEL

Extension registers
None

Associated logs
None

DDNUNAVL

Register type
Peg

Description
DDNUNAVL increases when a reverse translator is not entered in table CUSTNTWK for a unique number calling a DDN subscriber. The system delivers the ten-digit DN in the CLID parameter to the DDN subscriber instead of the DDN parameter.

Reverse translations for DDN are entered in tables DNREGION, DNREVXLA, and CUSTNTWK. DDNUNAVL does not apply to ISDN sets.

Associated registers
CNDDNDEL

Extension registers
None

Associated logs
None

LDIDEL--Canada only

Register type
Peg

Description
LDIDEL increases when the calling information delivered to the subscriber has call qualifier L, indicating a long-distance call.

The register does not apply to ISDN sets and is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
LDIDEL2

Associated logs
None

LDIOVFL--Canada only

Register type
Peg

Description
LDIOVFL increases when the long-distance call qualifier is not sent to the subscriber. The qualifier is not sent to the subscriber because room in the multiple data message is not present.

LDIOVFL does not apply to ISDN sets and is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
None

NNDUNAVL

Register type
Peg

Description
NNDUNAVL is set zero. The register is not supported on the DMS-100G switch.

Associated registers
None

Extension registers
None

Associated logs
None

SCWDNYDS

Register type
Peg

Description
SCWDNYDS counts the number of calls not allowed to display because the controller activated CSCWID before originating the current call. The register does not apply to ISDN sets.

Associated registers
CSCWDACT

Extension registers
None

Associated logs
None

SCWIDDEL

Register type
Peg

Description
SCWIDDEL counts all SCWID data delivered for awaiting call to the XPM from the CM.

Note: SCWIDDEL indicates that the system delivers SCWID data to the XPM from the CM. Associated OM group CNDXPM must be

referenced to determine if the XPM delivered the SCWID data to the telephone of the subscriber.

SCWIDDEL does not apply to ISDN sets and is not supported on the DMS-100G switch.

Associated registers
Each register for each CLASS display feature assigned increases as SCWIDDEL increases.

Extension registers
None

Associated logs
None

CNDB

Description

OM group Calling Number Delivery Blocking (CNDB) provides information on office-wide use of the following:

- Calling Number Delivery Blocking (CNDB) feature for Residential Enhanced Services (RES)
- Meridian Digital Centrex (MDC)
- Integrated Services Digital Network (ISDN) lines
- Resource shortages or denials that result from use of the CNDB, MDC and ISDN

CNDB prevents directory number (DN) on the display of the terminating equipment for each party call. The terminating display of the party shows P for private if CND is active on the called RES or MDC line.

You access calling number suppression through calling number blocking (CNB) and calling name/number blocking (CNNB) as well as CNDB. You can obtain calling number suppression alone or as part of the common access group of features.

CNDB counts:

- attempts to use CNDB
- attempts to use CNDB with common access
- successful use of CNDB
- denials of CN DB, CNB, or CNNB because the feature is not available
- failures of CNDB caused by not enough software resource
- successful name suppression

The following table lists the key and info fields associated with OM group CNDB.

Key field	Info field
None	None

Related functional groups

CLASS/CMS RES functional group is associated with OM group CNDB.

Registers

The following table lists the registers associated with OM group CNDB and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CNDB

Register name	Measures
CNBDENY	Calling number blocking denial
CNDBATT	Calling number delivery blocking attempts
CNDBDENY	Calling number delivery blocking denial
CNDBFDEN	Calling number delivery blocking feature access denied
CNDBOVFL	Calling number delivery blocking overflow
CNDBSUP	Calling number delivery blocking suppression
CNDBUNIV	Calling number delivery blocking universal access
CNDBUSUP	Calling number delivery blocking unsuppressed
CNNBDENY	Calling name and number blocking denial
CNNBSUP	Calling name and number delivery blocking suppression

CNBDENY

Register type
Peg

Description
CNBDENY counts the number of CNB common attempts denied because the SO option DENYCNB is active. The register does not apply to ISDN sets.

Associated registers
CNDBFDEN

Extension registers
None

Associated logs
None

CNDBATT

Register type
Peg

Description
The system increases the register CNDBATT when a subscriber dials the access code for CNDB, CNB, or CNNB. Increases in register CNDBATT do not indicate successful CNDB activation.

The system increases register CNDBATT when an ISDN subscriber activates CIDSSUP with the access code.

Associated registers
CNDBFDEN, CNDBOVFL, CNDBSUP, CNDBUSUP, CNNBSUP

Validation formula
CNDB_CNDBATT = CNDB_CNDBSUP + CNDB_CNDBUSUP + CNDB_CNDBFDEN + CNDB_CNDBOVFL + CNDB_CNNBSUP + no calls

where no calls = successful activation of CNDB and the subscriber does not make a call.

Extension registers
None

Associated logs
None

CNDBDENY

Register type
Peg

Description
CNDBDENY counts the number of CNDB common access attempts denied. The system denies the CNDB common access attempts when the SO option DENYCNDB is in active. CNDBDENY does not apply to ISDN sets.

Associated registers
CNDBFDEN

Extension registers
None

Associated logs
None

CNDBFDEN

Register type
Peg

Description
The system increases the register CNDBFDEN when the system cannot activate CNDB, CNB, or CNNB for any of the following reasons:

- the CNDB or CIDSSUP ISDN option is not available on the line or customer group
- CNDB in table RESOFC is not enabled for the office
- the system makes a common access attempt and line has the associated DENY option.

The system routes the call to FNAL treatment.

Associated registers
CNDBATT, CNDBOVFL, CNDBSUP, CNDBUSUP, CNNBSUP

Validation formula
CNDB_CNDBATT = CNDB_CNDBSUP + CNDB_CNDBUSUP + CNDB_CNDBFDEN + CNDB_CNDBOVFL + CNDB_CNNBSUP + no calls

where no calls = successful activation of CNDB and the subscriber does not make a call.

Extension registers
None

Associated logs
LINE138

CNDBOVFL

Register type
Peg

Description
CNDBOVFL is incremented when CNDB or CIDSSUP cannot be activated because software resources such as feature data blocks

required for CNDB are busy or unavailable. The call is routed to NOSR treatment. CNDBOVFL is not incremented on the DMS-100G switch.

Associated registers
CNDBATT, CNDBFDEN, CNDBSUP, CNDBUSUP, CNNBSUP

Validation formula
CNDB_CNDBATT = CNDB_CNDBSUP + CNDB_CNDBUSUP + CNDB_CNDBFDEN + CNDB_CNDBOVFL + CNDB_CNNBSUP + no calls

where no calls = successful activation of CNDB and the subscriber does not make a call.

Extension registers
None

Associated logs
LINE138

CNDBSUP

Register type
Peg

Description
The system increases the register CNDBSUP when the following two conditions occur. The system must correctly activate CNDB and suppress the number of the originating caller.

The system increases this register for ISDN subscribers when an ISDN set activates CIDSSUP with an access code.

Associated registers
CNDBATT, CNDBFDEN, CNDBOVFL, CNDBUSUP, CNNBSUP, ORGFSET or SYSFSET (of OM group OTS)

Validation formula
CNDB_CNDBATT = CNDB_CNDBSUP + CNDB_CNDBUSUP + CNDB_CNDBFDEN + CNDB_CNDBOVFL + CNDB_CNNBSUP + no calls

where no calls = successful activation of CNDB and the subscriber does not make a call.

Extension registers
None

Associated logs
None

CNDBUNIV

Register type
Peg

Description
CNDBUNIV counts the number of CNDB, CNB, CNNB, and CIDSSUP universal access attempts.

Associated registers
CMDBATT, which causes CNDBUNIV to increase as it increases

Extension registers
None

Associated logs
None

CNDBUSUP

Register type
Peg

Description
The system increases register CNDBUSUP when the number of the originating caller can appear on a display. The display is on the equipment of the terminating party for a call on a line with CNDB. The system also increases this register when the system suppresses the number of the originating caller. The system suppresses the number even though the originating subscriber attempts to allow the DN to appear on a display. The display is on the equipment of the terminating party for the call. This condition can occur if you set suppression at the office level in table NETNAMES.

CNDBUSUP does not apply to ISDN lines because ISDN does not support the CNDB toggle feature is not supported with ISDN.

Associated registers
CNDBATT, CNDBFDEN, CNDBOVFL, CNDBSUP, CNNBSUP, ORGFSET or SYSFSET (of OM group OTS)

Validation formula
CNDB_CNDBATT = CNDB_CNDBSUP + CNDB_CNDBUSUP + CNDB_CNDBFDEN + CNDB_CNDBOVFL + CNDB_CNNBSUP + no calls

where no calls = successful activation of CNDB and the subscriber does not make a call.

Extension registers
None

Associated logs
None

CNNBDENY

Register type
Peg

Description
CNNBDENY counts the number of CNNB universal attempts denied because the SO option DENYCNNB is active. The register does not apply to ISDN sets.

Associated registers
CNDBFDEN

Extension registers
None

Associated logs
None

CNNBSUP

Register type
Peg

Description
The system increases register CNNBSUP when CNNB suppresses the name and number of the originating caller. The system suppresses the DN of the originating caller that does not have an associated name.

The system increases this register CNNBSUP for ISDN sets when CIDSSUP correctly suppresses a name and DN option.

Associated registers
CNDBATT, CNDBFDEN, CNDBOVFL, CNDBUSUP, CNDBSUP

Validation formula
CNDB_CNDBATT = CNDB_CNDBSUP + CNDB_CNDBUSUP + CNDB_CNDBFDEN + CNDB_CNDBOVFL + CNDB_CNNBSUP + no calls

where no calls = successful activation of CNDB and the subscriber does not make a call.

Extension registers
None

Associated logs
None

CNDXPM

Description

OM group Calling Number Delivery in XMS-based Peripheral Modules (CNDXPM) pegs CND events in XPMs. You can view the CLASS Modem Resource (CMR) card events at the end of a monitoring period with the command OMSHOW CNDXPM HOLDING. CNDXPM registers accumulate total events that occur in the current monitoring period. The OMSHOW CNDXPM ACTIVE command does not display the current OM period count totals.

CNDXPM counts event attempts, including failures, to deliver calling numbers for each PM. The XMS-based PMs that follow are included:

- line trunk controller (LTC)
- line group controller (LGC)
- subscriber carrier module-100 access (SMA)
- subscriber carrier module-100S (SMS)
- subscriber carrier module-100S remote (SMS-R)
- subscriber carrier module-100 urban (SMU)
- remote cluster controller (RCC)
- remote cluster controller 2 (RCC2)

The following table lists the key and info fields associated with OM group CNDXPM.

Key field	Info field
None	PM_NAME: peripheral name

The system enters the Info field information in table LTCINV or RCCINV.

A CLASS modem resource (CMR) card must be present in the XPM and entered in table LTCINV or RCCINV for CND to work correctly.

Related functional groups

There are no functional groups associated with OM group CNDXPM.

Registers

The following table lists the registers associated with OM group CNDXPM and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CNDXPM (Sheet 1 of 2)

Register name	Measures
ADSIATTS	Analog Display Services Interface (ADSI) Attempts
ADSICOMP	ADSI completions
CMRADSIR	CMR ADSI requests
CMRBCLDR	CMR BCLID requests
CMRCNDRQ	CMR CND requests
CMRFASTQ	CMR fast queue elements
CMRMODEM	CMR modems
CMRRINGD	CMR ring detectors
CMRSHRAM	CMR shared RAM messages
CMRTIMRQ	CMR timer requests
CNDATTS	Calling number delivery attempts
CNDCOMP	Calling number delivery completions
CNDEANS	Calling number delivery (CND) early answer
CNDMSG	Calling number delivery XMS-based peripheral module OM message
CNDNOMDM	Calling number delivery (CND) no modem resource available
CNDNOMON	Calling number delivery (CND) no ringing monitor available
CNDOABND	Calling number delivery originator abandon
SCWDATTS	Spontaneous call waiting identification (SCWID) attempts

Registers for OM group CNDXPM (Sheet 2 of 2)

Register name	Measures
SCWDCOMP	Spontaneous call waiting identification (SCWID) completed
SCWDFAIL	Spontaneous call waiting identification (SCWID) failure
SCWDNAKA	Spontaneous call waiting identification (SCWID) no ACK alerting
SCWDNAKR	Spontaneous call waiting identification (SCWID) no ACK re-alerting
SCWDNUTR	Spontaneous call waiting identification (SCWID) no universal tone receivers (UTR) channels
SCWDOVLP	Spontaneous call waiting identification (SCWID) overlap

ADSIATTS

Register type
Peg

Description
ADSIATTS records the total number of ADSI attempts during the last OM reporting period.

Associated registers
None

Extension registers
None

Associated logs
None

ADSICOMP

Register type
Peg

Description
ADSICOMP records the total number of ADSI completions during the last OM reporting period.

Associated registers
None

Extension registers
None

Associated logs
None

CMRADSIR

Register type
Peg

Description
CMRADSIR records the maximum number of ADSI modem requests handled at the same time by the CMR during the last OM reporting period. The maximum number of ASDI sessions allowed is ten.

Associated registers
None

Extension registers
None

Associated logs
None

CMRBCLDR

Register type
Peg

Description
CMRBCLDR records the maximum number of BCLID modem at the same time requests handled by the CMR during the last OM reporting period. The maximum number of BCLID sessions allowed is ten.

Associated registers
None

Extension registers
None

Associated logs
None

CMRCNDRQ

Register type
Peg

Description
CMRCNDRQ records the maximum number of CMR CND at the same time requests handled by the CMR during the last OM reporting period.

Associated registers
None

Extension registers
None

Associated logs
None

CMRFASTQ

Register type
Peg

Description
CMRFASTQ records the maximum number of CMR FAST queue elements used at the same time by the CMR. The CMR uses these elements during the last OM reporting period. The FAST queue is the CMR internal queue for all functions except the diagnostics.

Associated registers
None

Extension registers
None

Associated logs
None

CMRMODEM

Register type
Peg

Description
CMRMODEM records the maximum number of CMR modems used at the same time by the CMR. The CMR uses these modems during the last OM reporting period. Each CMR card contains 32 modems.

Associated registers
None

Extension registers
None

Associated logs
None

CMRRINGD

Register type
Peg

Description
CMRRINGD records the maximum number of CMR ring detectors used at the same time by the CMR. The CMR uses these detectors during the last OM reporting period. Each CMR card contains 32-ring detectors.

Associated registers
None

Extension registers
None

Associated logs
None

CMRSHRAM

Register type
Peg

Description
CMRSHRAM records the maximum number of messages in the shared RAM interface of the CMP at the same time. The CMP contains these messages during the last OM reporting period. The maximum number of messages from the SP to the CMR at the same time is 64.

Associated registers
None

Extension registers
None

Associated logs
None

CMRTIMRQ

Register type
Peg

Description
CMRTIMRQ records the maximum number of CMR timer queue elements used at the same time by the CMR. The CMP uses these elements during the last OM reporting period. The maximum number of timer queues that the system can use at one time is 27.

Associated registers
None

Extension registers
None

Associated logs
None

CNDATTS

Register type
Peg

Description
CNDATTS records the total number of CND attempts during the last OM reporting period.

Associated registers
None

Extension registers
None

Associated logs
None

CNDCOMP

Register type
Peg

Description
CNDCOMP records the total number of CND completions during the last OM reporting period.

Associated registers
None

Extension registers
None

Associated logs
None

CNDEANS

Register type
Peg

Description
CNDEANS increases when the system cannot deliver a calling number. The system cannot deliver the number because the CND subscriber answered a call before the calling information. This failure of delivery occurs when the caller answers before the end of the first ring.

Associated registers
None

Extension registers
None

Associated logs
None

CNDMSG

Register type
Peg

Description
CNDMSG increases when the system transfers CNDXPM OM data to the CC.

Associated registers
None

Extension registers
None

Associated logs
None

CNDNOMDM

Register type
Peg

Description
CNDNOMDM increases when CND fails because modem resources are not available on the CLASS modem resource (CMR) card. The CMP card is in the XPM that supports the line in use. CNDNOMDM is not pegged if the CMR card is BSY. If the CMR card is BSY, the call is treated as a non-CND call.

Associated registers
None

Extension registers
None

Associated logs
None

CNDNOMON

Register type
Peg

Description
CNDNOMON increases when CND fails because ringing monitors are not available on the CMR card. The CMR card is in the XPM that supports the line in use.

Associated registers
None

Extension registers
None

Associated logs
None

CNDOABND

Register type
Peg

Description
CNDOABND increases when the system does not deliver a calling number. The system does not deliver a calling number because the calling party abandoned the call before the first ring.

Associated registers
None

Extension registers
None

Associated logs
None

SCWDATTS

Register type
Peg

Description
SCWDATTS increases each time the XPM receives a request to make a SCWID call.

Associated registers
SCWDCOMP, SCWDFAIL

Extension registers
None

Associated logs
None

SCWDCOMP

Register type
Peg

Description
SCWDCOMP increases each time the XPM successfully transmits data to the SCWID line.

Associated registers
SCWDATTS, SCWDFAIL

Extension registers
None

Associated logs
None

SCWDFAIL

Register type
Peg

Description
SCWDFAIL increases each time the XPM fails to transmit data to the CMR card. The copy is successful when the system copies data to the CMR card.

Associated registers
SCWDATTS, SCWDCOMP,

Extension registers
None

Associated logs
None

SCWDNAKA

Register type
Peg

Description
SCWDNAKA increases each time the XPM expects an acknowledgement tone and a tone does not transmit. The tone is from customer premises equipment and occurs during alerting.

Associated registers
SCWDATTS

Extension registers
None

Associated logs
None

SCWDNAKR

Register type
Peg

Description
SCWDNAKR increases each time the XPM expects an acknowledgement tone and a tone does not transmit. The tone is from the customer premises equipment and occurs during re-alerting.

Associated registers
SCWDATTS, SCWDNAKA, SCWDFAIL

Extension registers
None

Associated logs
None

SCWDNUTR

Register type
Peg

Description
SCWDNUTR increases each time the XPM receives a SCWID request with the ACK_TONE option and UTR channels are not available. The UTR channels monitor for the ACK tone.

Associated registers
SCWDATTS, SCWDCOMP

Extension registers
None

Associated logs
None

SCWDOVLP

Register type
Peg

Description
SCWDOVLP increases each time the XPM tries to apply call waiting tone 2 (CWT2) and the data transmission is not complete.

Associated registers
SCWDATTS

Extension registers
None

Associated logs
None

ConfLoc

Description

The OM group carries counts for various usages of the Conference Locator service.

Note: The Conference Locator service is not longer loaded so this OM will not show up in the OM browser.

The following table lists the key and info fields associated with OM group ConfLoc.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group ConfLoc:

- Session Manager

Registers

The following table lists the registers associated with OM group ConfLoc and what they measure. For a description of a register, click on the register name.

Registers for OM group ConfLoc

Register name	Measures
maxConfusersOM	maximum conference users
confAttemptsOM	conference request attempts
confSetupOM	conference setup

maxConfusersOM

Register type
Peg

Description
Conference resource full counter

Associated registers
None

Extension registers
None

Associated logs
None

confAttemptsOM

Register type
Peg

Description
Conference request attempts counter

Associated registers
None

Extension registers
None

Associated logs
None

confSetupOM

Register type
Peg

Description
Successful Conference setup counter

Associated registers
None

Extension registers
None

Associated logs
None

ConvDesk

Description

The OM group carries counts for various usages of the Converged Desktop service.

The following table lists the key and info fields associated with OM group ConvDesk.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group ConvDesk:

- Session Manager

Registers

The following table lists the registers associated with OM group ConvDesk and what they measure. For a description of a register, click on the register name.

Registers for OM group ConvDesk

Register name	Measures
cdC2C	converged desktop click-to-call attempts
cdComplex	converged desktop complex calls
cdOrigination	converged desktop originations
cdSimplex	converged desktop simplex terminations

cdC2C

Register type
Peg

Description
A count of the number of CD Click-to-Calls attempts made by CD2 subscribers.

Associated registers
None

Extension registers
None

Associated logs
None

cdComplex

Register type
Peg

Description
Measures the number of audio calls routed through the MCP, when the MCP is in control of the call. These calls are also more costly, due to the larger amount of signaling involved and the use of a GW in the call path. This OM is also pegged on simple termination if the user is not registered on a CD2 Multimedia PC client, and the Personal Agent indicates a route to MYCLIENT

Associated registers
None

Extension registers
None

Associated logs
None

cdOrigination

Register type
Peg

Description
Measures the number of originations that were placed from a CD2 user's Converged Phone. This OM is pegged whether an audio call is sent to the MCP or not. This is based on Notify Originations. This OM is not pegged on click to call.

Associated registers
cdSimplex

Extension registers
None

Associated logs
None

cdSimplex

Register type
Peg

Description
Measures the number of simplex terminations. These are based on Invites.

Associated registers
cdOrigination

Extension registers
None

Associated logs
None

COT

Description

OM group Customer-Orientated Trace (COT) measures the use of the Customer-originated Trace feature for an office. The COT feature can be obtained separately or as part of the common access group of features. Registers in COT count attempts, successful completions, unfinished completions, and reasons for failures. Registers count the number of failures caused by:

- abandons by user
- too many digits
- digit collection time outs
- no service circuits
- not enough software resource
- no connections available
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain registers when subscribers do one of the following from an off-board application:
  - query the status and/or programmed information of corresponding subscribed-to services
  - generate a request to activate, deactivate or change the services

  For more information about the Off-board Service Control feature, refer to *"Advanced Intelligent Network Essentials Service Implementation Guide*", 297-5161-021, and the *"Advanced Intelligent Network Essentials Service Enablers"*, 297-5161-022.

  The Off-board Service Control feature applies only to DMS.

OM group COT data helps to monitor completion of COT feature use and identify areas that can cause repeated problems.

The following table lists the key and info fields for OM group COT.

Key field	Info field
None	None

Related functional groups

The CLASS/CMS RES functional groups are associated with OM group COT.

Registers

The following table lists the registers associated with OM group COT and what they measure. For a description of a register, click on the register name.

Registers for OM group COT

Register name	Measures
COTATT	COT access attempts
COTBDIN	COT bad digit input for two-level activation
COTCMPL	COT complete traces
COTDENY	COT universal access denial
COTFDEN	COT feature denied
COTINCM	COT incomplete traces
COTOPTO	COT opt out of two-level activation
COTOVFL	COT software resource overflow
COTPFLR	COT prompt failure in two-level activation
COTPRCD	COT proceed with two-level activation
COTUNIV	COT universal access attempts

COTATT

Register type
Peg

Description
COTATT counts the number of times subscriber dials the access code for the COT feature. Increases in COTATT do not indicate that COT activated successfully.

For DMS only: COTATT is pegged if the COT Update message for the COT service is received (off-board service update).

Associated registers
COTFDEN, COTOVFL, COTPFLR, COTOPTO, COTBDIN, COTCMPL, COTINCM

Validation formula
COTATT = COTFDEN + COTOVFL + COTPFLR + COTOPTO + COTBDIN+ COTCMPL + COTINCM

Extension registers
None

Associated logs
None

COTBDIN

Register type
Peg

Description
COTBDIN increases when a subscriber enters a wrong digit for COT two-level activation. Register COTBDIN also increases when digit collection time out occurs too many times. The LN_PERM_SIG_TIME in table OFCENG defines the Digit collection time out value. In either condition, the subscriber receives NACK treatment.

Associated registers
COTATT, COTFDEN, COTOVFL, COTPFLR, COTOPTO, COTCMPL, COTINCM

Validation formula
COTATT = COTFDEN + COTOVFL + COTPFLR + COTOPTO + COTBDIN+ COTCMPL + COTINCM

Extension registers
None

Associated logs
LINE138

COTCMPL

Register type
Peg

Description
COTCMPL counts the number of completed traces.

Associated registers
COTATT, COTFDEN, COTOVFL, COTPFLR, COTOPTO, COTBDIN, COTINCM

Validation formula
COTATT = COTFDEN + COTOVFL + COTPFLR + COTOPTO + COTBDIN+ COTCMPL + COTINCM

Percentage of successful traces = COTCMPL / COTATT - (COTFDEN +COTOVFL + COTPFLR + COTOPTO + COTBDIN + COTINCM) x100

Extension registers
None

Associated logs
LINE150-FULL COT TRACE

COTDENY

Register type
Peg

Description
COTDENY increases when the system denies the subscriber universal access to the COT feature (the DENYCOT option is active).

Associated registers
COTFDEN (increases when COTDENY increases)

Extension registers
None

Associated logs
None

COTFDEN

Register type
Peg

Description
COTFDEN counts each time a subscriber cannot activate the COT feature. The subscriber cannot activate the COT features for one of the following reasons:

- the COT option is not on the line or is not enabled in table RESOFC for the office
- access prevents other features on the line

The caller receive NACK or FNAL treatment.

Associated registers
COTATT, COTOVFL, COTPFLR, COTOPTO, COTBDIN, COTCMPL, COTINCM

Validation formula
COTATT = COTFDEN + COTOVFL + COTPFLR + COTOPTO + COTBDIN+ COTCMPL + COTINCM

Extension registers
None

Associated logs
LINE138

COTINCM

Register type
Peg

Description
COTINCM counts the number of times the system generates a partial trace.

Associated registers
COTATT, COTFDEN, COTOVFL, COTPFLR, COTOPTO, COTBDIN, COTCMPL

Validation formula
COTATT = COTFDEN + COTOVFL + COTPFLR + COTOPTO + COTBDIN+ COTCMPL + COTINCM

Extension registers
None

Associated logs
LINE151-PART COT TRACE

COTOPTO

Register type
Peg

Description
COTOPTO counts the number of times a subscriber terminates a phone call. The termination avoids activation of two-level COT.

Associated registers
COTATT, COTFDEN, COTOVFL, COTPFLR, COTBDIN, COTCMPL, COTINCM

Validation formula
COTATT = COTFDEN + COTOVFL + COTPFLR + COTOPTO + COTBDIN+ COTCMPL + COTINCM

Extension registers
None

Associated logs
None

COTOVFL

Register type
Peg

Description
COTOVFL counts the number of times a subscriber cannot activate the COT feature. The subscriber cannot activate COT feature because not enough feature data blocks (FDB) or an incoming memory block (ICMB) is on the line. The caller receives NOSR treatment.

Associated registers
COTATT, COTFDEN, COTPFLR, COTOPTO, COTBDIN, COTCMPL, COTINCM

Validation formula
COTATT = COTFDEN + COTOVFL + COTPFLR + COTOPTO + COTBDIN+ COTCMPL + COTINCM

Extension registers
None

Associated logs
LINE138

COTPFLR

Register type
Peg

Description
COTPFLR counts the number of times two-level activation of COT fails. Two-level activation of COT fails because of a failure of the utilities that collect digits during interruptible announcements. A failure can occur

because universal tone receivers (UTR), receiver service circuits (RCVR), or ports are not available.

If the failure occurs for one of these reasons, the system routes the call to NOSC treatment. If COT fails because feature data blocks (FDB) are not available, the call receives NOSR treatment. If COT fails because connections are not available, the system routes the call to NBLH treatment.

Associated registers
COTATT, COTFDEN, COTOVFL, COTOPTO, COTBDIN, COTCMPL, COTINCM

Validation formula
COTATT = COTFDEN + COTOVFL + COTPFLR + COTOPTO + COTBDIN+ COTCMPL + COTINCM

Extension registers
None

Associated logs
LINE138

COTPRCD

Register type
Peg

Description
COTPRCD increases when a subscriber dials 1 to continue two-level activation of COT.

Associated registers
None

Extension registers
None

Associated logs
None

COTUNIV

Register type
Peg

Description
COTUNIV counts the number of times a universal subscriber attempts to access COT.

For DMS only: COTUNIV is pegged when the COT Update message is received for the universal COT service (off-board service update).

Associated registers
None

Extension registers
None

Associated logs
None

CP

Description

OM group Call Processing Software Resources (CP) provides information on the use of call processing software resources such as call condense blocks, call processes, multi blocks, wake-up blocks, and long buffers. CP is provided for all types of DMS switch offices.

The following table lists the key and info fields associated with OM group CP.

Key field	Info field
None	There are six information fields. The first always has value zero (0). The remaining five contain the number of CP letters, wake-up blocks, call processes, call condense blocks, and long buffers that are provisioned for the office.

The following table describes the parameters that must be datafilled in tables OFCENG and OFCSTD must be datafilled for OM group CP.

Parameters for tables OFCENG and OFCSTD

Table	Parameter	Defines number of:
OFCENG	NCCBS	Call condense blocks
OFCENG	NUMCALLPROCESS	Call processes
OFCENG	NMULTIBLKS	Multi blocks
OFCENG	NUMCPWAKE	Wake-up blocks
OFCENG	NUMLONGBUFFERS	Long buffers
OFSTD	NUMOUTBUFFS	Outgoing buffers

Related functional groups

There are no functional groups associated with OM group CP.

Registers

The following table lists the registers associated with OM group CP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CP (Sheet 1 of 2)

Register name	Measures
CCBOVFL	Call condense block overflow
CCBSZ	Call condense block seizures
CINTIC	Calls lost cold restart
CPLBOOVF	Long origination denials
CPLOOVFL	Call processing letters overflow originating calls
CPLOSZ	Call processing letters seizures originating calls
CPLPOVFL	Call processing letters overflow existing calls
CPLSZ	Call processing letters seizures existing calls
CPSUIC	Call process suicide
CPSZ	Call process seizures
CPTRAP	Call process trap
INITDENY	Call originations denied, cold and warm restarts
INLBOVFL	Incoming long buffer overflow
INLBSZ	Incoming long buffer seizure
MULTOVFL	Multi block overflow
MULTSZ	Multi block seizure
ORIGDENY	Origination denial
OUTBOVFL	Outgoing buffer overflow

Registers for OM group CP (Sheet 2 of 2)

Register name	Measures
OUTBSZ	Outgoing buffer seizures
WAITDENY	Wait denial
WAKEOVFL	CPWAKEUP block overflow
WAKESZ	CPWAKEUP block seizure
WINITC	Calls lost warm restart

CCBOVFL

Register type
Peg

Description
CCBOVFL counts originating messages that are lost because no idle call condense blocks (CCB) are available to which they can be assigned.

Associated registers
None

Extension registers
None

Associated logs
OM2200

CCBSZ

Register type
Peg

Description
CCBSZ is incremented when a call condense block is allocated to an originating call.

Associated registers
The following registers are associated with CCBSZ:

- OFZ_NIN, which counts incoming calls
- OFZ_NORIG, which counts originating calls

Validation formula
CP_CCBSZ ≥ OFZ_NIN + OFZ_NORIG

Extension registers
CCBSZ2

Associated logs
None

CINTIC

Register type
Peg

Description
CINITC counts call condense blocks that were in use at the time of a cold restart. This count is equal to the number of calls that were in progress and lost because of the cold restart.

Associated registers
None

Extension registers
CINITC2

Associated logs
CC107, INIT

CPLBOOVF

Register type
Peg

Description
CPLBOOVF counts long originations that were denied to reserve long buffers for long progress messages.

Associated registers
None

Extension registers
None

Associated logs
None

CPLOOVFL

Register type
Peg

Description
CPLOOVFL counts originating messages that could not be passed to call processing using a CP letter because the number of letters available did not exceed the number reserved for calls in progress.

If the register is being pegged when the CPU is overloaded. Calling capacity has been exceeded temporarily because of a very high busy hour. Parameter ORIGTHRES in table OFCENG needs to be examined.

Associated registers
None

Extension registers
None

Associated logs
OM2200

CPLOSZ

Register type
Peg

Description
CPLOSZ counts origination messages that are successfully attached to a call condense block.

Associated registers
None

Extension registers
CLOPSZ2

Associated logs
None

CPLPOVFL

Register type
Peg

Description
CPLPOVFL counts attempts to send a progress message to an existing call that fail because no CP letters are available. The register is pegged when the CPU is overloaded. Calling capacity has been exceeded temporarily because of a very high busy hour. Parameter ORIGTHRES in table OFCENG needs to be examined.

Associated registers
None

Extension registers
None

Associated logs
OM2200

CPLSZ

Register type
Peg

Description
CPLSZ counts seizures of CP letters that carry messages to calls already in the system.

Associated registers
None

Extension registers
CPLSZ2

Associated logs
None

CPSUIC

Register type
Peg

Description
CPSUIC counts calls that fail during call processing because unexpected results were detected during call processing.

Associated registers
None

Extension registers
None

Associated logs
NET101, SWER, AUDT100, AUDT103, AUD395, AUD398

CPSZ

Register type
Peg

Description
CPSZ is incremented when a call process is activated, which can occur several times during a call.

Associated registers
None

Extension registers
CPSZ2

Associated logs
None

CPTRAP

Register type
Peg

Description
CPTRAP counts calls that fail during call processing because the call processing unit hardware detected illegal software conditions. CPTRAP counts only those traps that affect call processing.

Associated registers
CPU_TRAPINT, which counts the number of trap interrupts

Validation formula
CP_CPTRAP ≤CPU_TRAPINT

Extension registers
None

Associated logs
SWER, TRAP, AUDT101, AUDT103, AUD197, CC103, CC104

INITDENY

Register type
Peg

Description
INITDENY counts line and trunk call originations that are lost during cold and warm restarts.

Associated registers
The following registers are associated with INITDENY:

- OFZ_NIN, which counts incoming calls.
- OFZ_NORIG, which counts originating calls.

The values in OFZ_NIN and OFZ_NORIG are converted into a measure of average call origination volume per unit time. This measure multiplied by the duration of the restart is used to increment INITDENY.

Extension registers
None

Associated logs
CC107

INLBOVFL

Register type
Peg

Description
INLBOVFL counts requests for a long buffer for an incoming long message that are unsuccessful because there were no free long buffers in the system.

Associated registers
None

Extension registers
None

Associated logs
OM2200

INLBSZ

Register type
Peg

Description
INLBSZ counts successful requests for a long buffer for an incoming long message.

Associated registers
None

Extension registers
INLBSZ2

Associated logs
None

MULTOVFL

Register type
Peg

Description
MULTOVFL counts attempts at three-way calling that fail because no idle multi block is available.

Associated registers
None

Extension registers
None

Associated logs
OM2200

MULTSZ

Register type
Peg

Description
MULTSZ counts seizures of a multi block.

Associated registers
None

Extension registers
None

Associated logs
None

ORIGDENY

Register type
Usage

Description
ORIGDENY counts originations that are ignored by the CC because they were not serviced within 3 seconds of arrival.

Associated registers
None

Extension registers
None

Associated logs
None

OUTBOVFL

Register type
Peg

Description
OUTBOVFL counts outgoing messages that are lost because no idle outgoing buffer was available.

Associated registers
None

Extension registers
None

Associated logs
OM2200

OUTBSZ

Register type
Peg

Description
OUTBSZ counts messages to peripheral modules that are placed in an outgoing buffer because the CMC through which they are routed is busy.

Associated registers
None

Extension registers
None

Associated logs
None

WAITDENY

Register type
Peg

Description
WAITDENY counts calls that are lost because call processing requested a brief suspension and the associated call process was the only one available to process requests for service from other calls. The call is lost.

Associated registers
None

Extension registers
None

Associated logs
None

WAKEOVFL

Register type
Peg

Description
WAKEOVFL counts unsuccessful CPWAKEUP block seizures.

Associated registers
None

Extension registers
None

Associated logs
OM2200

WAKESZ

Register type
Peg

Description
WAKESZ counts CPWAKEUP block seizures.

Associated registers
None

Extension registers
WAKESZ2

Associated logs
None

WINITC

Register type
Peg

Description
WINITC counts calls in progress that were lost because of a warm restart. Following a restart, a short period of time may elapse before the register recognizes how many calls were lost.

Associated registers
None

Extension registers
None

Associated logs
CC107, INIT, SOS100, SWCT103

CP2

Description

OM group Call Processing Software Resources Extension (CP2) contains peg and usage registers that extend group CP. The group provides additional information on call processing software resources and on the use of extended call condense blocks (ECCB). All types of DMS switch offices can use CP2.

CP2 contains the high watermark OMs for call processing software resources. High watermark registers CPLHI, CCBHI, CPHI, OUTBHI, MULTHI, WAKEHI, and INLBHI count the following call processing software resources:

- call processing letters
- call condense blocks
- call processes
- outgoing buffers
- multi-blocks
- wakeup-service blocks
- long buffers

These registers count the preceding software resources if these resources are in use at the same time during the previous OM transfer period. You can use these registers to verify and adjust the engineered quantities of the resources.

The following table lists the key and info fields associated with OM group CP2.

Key field	Info field
None	There are two information fields. The first field value is0. The second field is the number of extended call control blocks for the office.

You must make entries in the following three tables: OFCENG, OFCSTD, and OFCVAR.

Office parameter NCCBS in table OFCENG defines the number of call condense blocks.

Office parameter NUMCALLPROCESSES in table OFCENG defines the number of call processes.

Office parameter ORIGTHRES in table OFCENG defines the maximum number of CP letters that the system can use to serve originations.

Office parameter NUMCPWAKE in table OFCENG defines the number of wakeup-service blocks.

Related functional groups

There are no functional groups associated with OM group CP2.

Registers

The following table lists the registers associated with OM group CP2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CP2

Register name	Measures
CCBHI	Call condense block high watermark
CPHI	Call processes high watermark
CPLHI	Call processing letters high watermark
CPWORKU	Call processing use
ECCBOVFL	Extended call control block unsuccessful attempts
ECCBSZ	Extended call control blocks successful seizures
ECCBTRU	Extended call control block usage
INEFDENY	Ineffective deny
INLBHI	Long buffer high watermark
MULTHI	Multiblock high watermark
OUTBHI	Outgoing buffer high watermark
OVRLD	Central control overload
WAKEHI	Wakeup block high watermark

CCBHI

Register type
Peg

Description
CCBHI reflects the maximum number of CCBs in use at the same time during the previous OM transfer period. This OM transfer period is 15 or 30 minutes. To predict peak use correctly, you must gather high watermarks for the busiest hours of the busiest days of the year. Follow the High Day Busy Hour or the Extreme Value Engineering method. Use this data to perform calculations and to adjust the number of CCBs. These adjustments make sure that the CCBs are never more than 80% busy during peak use periods.

At the start of each transfer period, the system initializes the active register to the number of CCBs currently in use. The system updates the active register continuously during the transfer period. The system updates this register when the number of blocks currently in use is greater than the value recorded at an earlier period of time.

At the end of the transfer period, the system transfers the active register value to the holding register (CCBHI). The active register value remains in the CCBHI until the system writes a new value. The system writes this value at the end of the next transfer period. The transfer period is 15 or 30 minutes.

To predict peak use, gather the maximum value of all the high watermarks from each transfer period during the busiest days of the year. Make sure that you add an additional amount to this value so that software resource use during peak periods does not exceed 80%. Enter the calculated value in office parameter NCCBS in table OFCENG.

Associated registers
None

Extension registers
CCBHI2

Associated logs
None

CPHI

Register type
Peg

Description
CPHI reflects the maximum number of call processes in use at the same time during the previous OM transfer period. The OM transfer period is 15 or 30 minutes. To predict peak use, correctly gather the high watermarks for the busiest hours of the busiest days of the year. Follow the High Day BusyHour or the Extreme Value Engineering method. Use this data to perform calculations and to adjust the number of call processes. These adjustments make sure that the call processes are never more than 80% used during the peak use periods.

At the start of each transfer period, the system initializes the active register to the number of call processes currently in use. The system updates the active register continuously during the transfer period. The system updates the active register when the number of call processes that are currently in use exceeds the previously recorded value.

At the end of the transfer period (15 or 30 minutes), the active register value is transferred to the holding register (CPHI), where it is retained without change until the system writes a new value. The system writes over a new value at the end of the next transfer period.

To predict correct peak use, take the maximum value of all high watermarks from each transfer period during the busiest days of the year. Calculate an addition to the maximum value to make sure of software resource use is not greater than the target 80% during peak use periods. Enter the calculated value in office parameter NUMCALLPROCESS in table OFCENG.

Associated registers
None

Extension registers
None

Associated logs
None

CPLHI

Register type

Peg

Description

CPLHI reflects the maximum number of call processing letters in simultaneous use during the previous OM transfer period. The OM transfer period is 15 or 30 minutes. To predict peak use, gather high watermarks for the busiest hours of the busiest days of the year. Follow the High Day Busy Hour or the Extreme Value Engineering method. Use this data to perform calculations to adjust call processing letters. Adjust the call processing letters to make sure that the letters are never more than 80% busy during peak use periods.

At the start of each transfer period, the system initializes the active register to the number of call processing letters currently in use. The system updates the active register continuously during the transfer period. The system updates the active register when the number of call processing letters currently in use is greater than the previously recorded value.

At the end of the transfer period, the system transfers the active register value to the holding register (CPLHI). The active value register remains in the CPLHI without change until the system writes over the value. The system writes over the value at the end of the next transfer period.

To predict correct peak use, take the maximum value of all high watermarks from each transfer period during busiest days of year. Add an additional calculated amount to this value. This addition makes sure that the system does not exceed the target 80% use of software resources during peak use periods. Software parameter NUMCPLETTERS sets the calculated amount.

You can use register CPLHI to indicate not enough CP letters.

Associated registers
The following registers are associated with CP2:

- CP_CPLPOVFL, which counts failed attempts to send a progress message to a current call. The attempts fail because idle CP letters are not available. Denial of CP letters to calls in progress can cause serious traffic degradation in the office.
- CP_CPLOOVFL counts messages that the system cannot pass to call processing through the originating buffers. The buffers associate with peripheral modules in the sequence given. The system cannot pass these messages to call processing with a CP letter. This condition occurs because the number of letters available is not greater than the number reserved for calls in progress.

Extension registers
None

Associated logs
None

CPWORKU

Register type
Usage

Scan rate
100 seconds

Description
The system scans the scheduler in the central control (CC). This register records the scheduler state. Use the count in CPWORKU to measure the amount of time that the CC undergoes heavy call processing.

Associated registers
None

Extension registers
None

Associated logs
None

ECCBOVFL

Register type
Peg

Description
ECCBOVFL counts failed requests for an ECCB. The requests fail because the system does not have enough software resources.

Associated registers
None

Extension registers
None

Associated logs
LINE138, TRK138

ECCBSZ

Register type
Peg

Description
ECCBSZ counts ECCBs that the system seizes.

Associated registers
None

Extension registers
ECCBSZ2

Associated logs
None

ECCBTRU

Register type
Usage

Scan rate
100 seconds

Description
The system scans the ECCBs, and register ECCBTRU records if these blocks are in use.

Associated registers
None

Extension registers
None

Associated logs
None

INEFDENY

Register type
Peg

Description
INEFDENY counts origination and abandon pairs that the central control (CC) ignores. The CC ignores the pairs because the pairs were not serviced in 0.5 seconds of the time origination arrived in the CC.

In DMS-250 switch offices, three messages associate with a CCB on the start queue. Register INEFDENY increases by the three-message toss. If message 1 is an origination and message 3 is an abandon or clear forward, the system ignores the origination. Register INEFDENY increases. If message 1 is an origination and message 2 is an abandon or clear forward and message 3 is not an origination, the system ignores the origination. Register INEFDENY increases.

Associated registers
None

Extension registers
None

Associated logs
None

INLBHI

Register type
Peg

Description
INLBHI reflects the maximum number of long buffers in use at the same time during the previous OM transfer period. The OM transfer period is 15 or 30 minutes. To predict peak usage correctly, gather high watermarks for the busiest hours of the busiest days of the year. Follow the High Day Busy Hour or the Extreme Value Engineering method. Use this data to perform calculations and to adjust the number of CCBs. These adjustments make sure that the CCBs are never more than 80% busy during peak use periods.

At the start of each transfer period, the system initializes the active register to the number of long buffers currently in use. The system updates the active register continuously during the transfer period. The

system updates the registers when the number of long buffers currently in use is greater than the previously recorded value.

At the end of the transfer period, the system transfers the active register value to the holding register (INLBHI). The active register value remains in the CCBHI until the system writes a new value at the end of the next transfer period.

To predict peak use, gather the maximum value of all the high watermarks from each transfer period during the busiest days of the year. Make sure that you add an additional amount to this value so that software resource use during peak periods does not exceed 80%. Enter the calculated value in office parameter NUMLONGBUFFERS in table OFCENG.

Associated registers
None

Extension registers
None

Associated logs
None

MULTHI

Register type
Peg

Description
MULTHI reflects the maximum number of multi-blocks in use at the same time during the previous OM transfer period. This OM transfer period is 15 or 30 minutes. To predict peak use correctly, you must gather high watermarks for the busiest hours of the busiest days of the year. Follow the High Day Busy Hour or the Extreme Value Engineering method. Use this data to perform calculations and to adjust the number of multi-blocks. These adjustments make sure that the multi-blocks are never more than 80% busy during peak use periods.

At the start of each transfer period, the system initializes the active register to the number of multi-blocks currently in use. The system updates the active register continuously during the transfer period. The system updates this register when the number of multi-blocks currently in use is greater than the value recorded at an earlier period of time.

At the end of the transfer period, the system transfers the active register value to the holding register (MULTHI). The active register value remains in the MULTHI until the system writes a new value. The system

writes this value at the end of the next transfer period. The transfer period is 15 or 30 minutes.

To predict peak use, gather the maximum value of all the high watermarks from each transfer period during the busiest days of the year. Make sure that you add an additional amount to this value so that software resource use during peak periods does not exceed 80%. Enter the calculated in office parameter NMULTIBLKS in table OFCENG.

Associated registers
None

Extension registers
None

Associated logs
None

OUTBHI

Register type
Peg

Description
OUTBHI reflects the maximum number of outgoing buffers in use at the same time during the previous OM transfer period. This OM transfer period is 15 or 30 minutes. To predict peak use correctly, you must gather high watermarks for the busiest hours of the busiest days of the year. Follow the High Day Busy Hour or the Extreme Value Engineering method. Use this data to perform calculations and to adjust the number of outgoing buffers. These adjustments make sure that the multi-blocks are never more than 80% busy during peak use periods.

At the start of each transfer period, the system initializes the active register to the number of outgoing buffers currently in use. The system updates the active register continuously during the transfer period. The system updates this register when the number of outgoing buffers currently in use is greater than the value recorded at an earlier period of time.

At the end of the transfer period, the system transfers the active register value to the holding register (OUTBHI). The active register value remains in the OUTBHU until the system writes a new value. The system writes this value at the end of the next transfer period. The transfer period is 15 or 30 minutes.

To predict peak use, gather the maximum value of all the high watermarks from each transfer period during the busiest days of the year. Make sure that you add an additional amount to this value so that software resource use during peak periods does not exceed 80%. Enter the calculated value in office parameter NUMOUTBUFFS in table OFCENG.

High use of outgoing buffers can cause central message controller (CMC) congestion or out-of-service states.

Associated registers
None

Extension registers
None

Associated logs
None

OVRLD

Register type
Peg

Description
OVRLD counts the number of minutes during which CC overload controls were active during the last OM transfer period. If the OVRLD field is set to on, this register increases every minute by CPSTATUS. You set the OVRLD field to on at the CPSTATUS display at the MAP terminal or on the CPSTAT output.

Associated registers
None

Extension registers
None

Associated logs
None

WAKEHI

Register type
Peg

Description
WAKEHI reflects the maximum number of wakeup-service blocks in use at the same time during the previous OM transfer period. This OM transfer period is 15 or 30 minutes. To predict peak use correctly, you must gather high watermarks for the busiest hours of the busiest days of the year. Follow the High Day Busy Hour or the Extreme Value Engineering method. Use this data to perform calculations and to adjust the number of outgoing buffers. These adjustments make sure that the multi-blocks are never more than 80% busy during peak use periods.

At the start of each transfer period, the system initializes the active register to the number of wakeup-service blocks currently in use. The system updates the active register continuously during the transfer period. The system updates this register when the number of wakeup-service blocks currently in use is greater than the value previously recorded.

At the end of the transfer period, the system transfers the active register value to the holding register (WAKEHI). The active register value remains in the WAKEHI until the system writes a new value. The system writes this value at the end of the next transfer period. The transfer period is 15 or 30 minutes.

To predict peak use, gather the maximum value of all the high watermarks from each transfer period during the busiest days of the year. Make sure that you add an additional amount to this value so that software resource use during peak periods does not exceed 80%. Enter the calculated value in office parameter NUMCPWAKE in table OFCENG.

Associated registers
None

Extension registers
None

Associated logs
None

CPCheckpoint

Description

This OM group is a usage counter on the inactive session Manager. It tracks the number of calls that the inactive session manager is checkpointing. In the event of a failover these calls will survive the failover. On the active node this counter is always 0. It is only tracking checkpointed calls on the hot standby instance.

The following table lists the key and info fields associated with OM group CPCheckpoint.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group CPCheckpoint:

- Session Manager

Registers

The following table lists the registers associated with OM group CPCheckpoint and what they measure. For a description of a register, click on the register name.

Registers for OM group CPCheckpoint

Register name	Measures
CallP Checkpoint	calls checkpointed

CallP Checkpoint

Register type
Usage

Scan rate

Description
Counts the current number of checkpointed calls.

Associated registers
None

Extension registers
None

Associated logs
None

CPICG

Description

OM group Call Progress Indication for Customer Groups (CPICG) counts calls that are completely inside ISDN and calls for which only one party is inside ISDN.

CPICG registers count calls when:

- both originator and terminator are ISDN terminals
- the originator is an ISDN terminal and the terminator is not an ISDN terminal
- the originator is not an ISDN terminal, the terminator is an ISDN terminal, and both terminals are on the same node
- the originator or terminator is an ISDN terminal and the other end is not on the ISDN node
- the call originates from an ISDN terminal and sent to a non-ISDN terminal in the same node. The system redirects the call to an ISDN terminal

The following table lists the key and info fields associated with OM group CPICG.

Key field	Info field
IBNG_INDEX in table CUSTHEAD	OMIBNGINFO is the customer group name entered in table CUSTHEAD

Table CUSTHEAD is required for translations. Table CUSTHEAD lists information for each customer group. The information contains:

- the customer or feature names for blocks of data entered in table IBNXLA
- the name for the block of data to specify digit collection, entered in table DIGCOL

Related functional groups

The integrated services digital network (ISDN) functional group is associated with the OM group CPICG.

Registers

The following table lists the registers associated with OM group CPICG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CPICG

Register name	Measures
DENOTISN	Call destination is non-ISDN
EENOTISN	Call is not end-to-end ISDN
INTRAISN	Call is ISDN to ISDN
ORNOTISN	Call start is not ISDN
RTRNISN	Call returns to the ISDN

DENOTISN

Register type
Peg

Description
DENOTISN increases when:

- an originating ISDN terminal makes a call within the same node to a non-ISDN terminal. Non-ISDN terminal include attendant consoles, IBN stations, or POTS stations.
- the entry for office parameter PI_CALL_TOPO in table OFCOPT is Y

Associated registers
None

Extension registers
None

Associated logs
None

EENOTISN

Register type
Peg

Description
EENOTISN increases when a call originates or terminates outside the ISDN network. Register EENOTISN counts calls that include trunk-to-ISDN terminal calls and ISDN terminal-to-trunk calls.

Associated registers
None

Extension registers
None

Associated logs
None

INTRAISN

Register type
Peg

Description
INTRAISN counts calls from an originating ISDN terminal to another ISDN terminal.

Associated registers
None

Extension registers
None

Associated logs
None

ORNOTISN

Register type
Peg

Description
ORNOTISN increases under the following conditions:

- when an originating non-ISDN terminal, makes a call to an ISDN terminal within the same node. Non-ISDN terminals include attendant consoles, ISN stations, or POTS stations.
- the entry for office parameter PI_CALL_TOPO in table OFCOPT is Y

Associated registers
None

Extension registers
None

Associated logs
None

RTRNISN

Register type
Peg

Description
RTRNISN counts calls that originates from an ISDN terminal and that the system call-forwards to a non-ISDN terminal. The system directs the calls to an ISDN terminal because of the following two conditions:

- Call Forward Do Not Answer activates
- the entry for office parameter PI_CALL_TOPO in table OFCOPT is Y.

Associated registers
DENOTISN, INTRAISN

Extension registers
None

Associated logs
None

CPICKUP

Description

OM group Call Pickup (CPICKUP) is a Meridian Digital Centrex (MDC) feature. The CPU feature allows a station to answer incoming calls to another station within a known call pickup group. The CPU feature is available for each station within a customer group.

CPICKUP reports on CPU feature activity. Each time the system attempts to pick up a call in the customer group, register CPUATT increases. If the system cannot connect to the originating party with the CPU feature, register CPUFAIL increases. Register CPUINVLD counts attempts to pickup a call that is not correct. The count increases when the CPU feature is active, a call to pickup is not present, or when race conditions are present.

The CPICKUP does not increase Directed Call Pickup, with the Barge-in (DCBI) or Non-barge-in (DCBU) options.

The following table lists the key and info fields associated with OM group CPICKUP.

Key field	Info field
IBNG_INDEX. The tuple number of CPICKUP is the key in the OMSHOW command. The maximum number of key fields is 4096.	Field CUSTNAME in table CUSTENG defines customer group OMIBNGINFO.

Table CUSTENG lists the values for the engineering parameters and options for each of the customer groups.

Related functional groups

The following functional groups are associated with OM group CPICKUP:

- Meridian Digital Centrex
- Meridian SL-100

Registers

The following table lists the registers associated with OM group CPICKUP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CPICKUP

Register name	Measures
CPUATT	Call pickup attempts
CPUFAIL	Call pickup failure
CPUINVLD	Call pickup invalid

CPUATT

Register type
Peg

Description
CPUATT counts attempts to pick up a call in a customer group.

Associated registers
None

Extension registers
None

Associated logs
AMAB150

CPUFAIL

Register type
Peg

Description
CPUFAIL increases when an attempt to pick up an incoming call fails. The system routes the call to negative acknowledgement treatment and register TRMT3_NACK increases.

Associated registers
TRMT3_NACK, which increases each time a call is routed to the negative acknowledgement (NACK) treatment

Extension registers
None

Associated logs
LINE138

CPUINVLD

Register type
Peg

Description
CPUINVLD counts attempts to pickup a call that is not correct. The count increases when the CPU feature is active but no call to pickup is present, or when race conditions occur.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CPUSTAT

Description

OM group Central Processing Unit Status (CPUSTAT) provides information on CPU occupancy. The CPU occupancy is the percentage of total CPU time that the CPU spends on one function. CPUSTAT shows the CPU percentage assigned to the scheduler and the percentage available for call processing at capacity. You can use this OM group to check capacity.

The support operating system (SOS) scheduler uses scheduler classes to allocate CPU time processes that occur at the same time. A scheduler class is a group of processes that perform like or related functions. CPUSTAT measures the CPU use of processes that runs in each scheduler class for all types of CPUs. The OM group CPUSTAT does not measure for the Bell-Northern Research reduced instruction set computer (BRISC) SuperNode core.

The OM group CPUSTAT registers count the following CPU occupancies:

- call processing
- call processing occupancy available
- scheduler
- system operations
- critical system maintenance
- Network Operating System (NOS) file transfer
- operational measurements
- guaranteed terminals
- processes that are not guaranteed and that you can delay
- idler
- auxiliary call processing
- network maintenance

Use the data supplied by CPUSTAT to calculate the average work time and the switch capacity for office equipment and engineering.

The following table lists the key and info fields associated with OM group CPUSTAT.

Key field	Info field
None	None

Parameter CC_ENGLEVEL_WARNING_THRESHOLD in table OFCENG defines the engineered occupancy level of the switch.

Parameter AUXCP_CPU_SHARE in table OFCENG shows the percentage of CPU time allocated for the auxiliary call processing scheduler class.

Parameter GUARANTEED_TERMINAL_CPU_SHARE in table OFCENG indicates the percentage of CPU time allocated for the guaranteed terminal scheduler class.

Related functional groups

The following functional groups are associated with CPUSTAT:

- DMS-100 Local
- DMS-100/200
- DMS-100/200 TOPS
- DMS-200
- DMS-200 TOPS
- DMS-100 Meridian
- DMS-MTX
- DMS-250
- DMS-300
- Meridian SL-100 PBX
- DMS-SuperNode

Registers

The following table lists the registers associated with OM group CPUSTAT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CPUSTAT

Register name	Measures
CCPAVAIL	CPU call processing available occupancy
CPSAUXCP	CPU status auxiliary call processing occupancy
CPSBKG	CPU status background occupancy
CPSCPOCC	CPU status call processing occupancy
CPSDNC	CPU status dynamic network controller occupancy
CPSFORE	CPU status front occupancy
CPSGTERM	CPU status guaranteed terminal occupancy
CPSIDLE	CPU status idler occupancy
CPSMAINT	CPU status maintenance occupancy
CPSNETM	CPU status network maintenance class
CPSOM	CPU status operational measurements occupancy
CPSSCHED	CPU status scheduler occupancy
CPSSNIP	CPU status of SuperNode internet protocol class

CCPAVAIL

Register type
Peg

Description
CCPAVAIL accumulates the CPU call processing available occupancies and displays this amount as an integer. Each of these occupancies is the percentage of CPU time that available for call processing in a given time sample. This occupancy is the difference between maximum CPU time available for call processing and the percentage of CPU time in use in a given time sample.

At the beginning of the transfer period, the system initializes CCPAVAIL to the current value of the CPU call processing available occupancy. The system updates the occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CCPAVAIL accumulates the value.

To obtain the average CPU call processing available occupancy for one min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSAUXCP

Register type
Peg

Description
Register CPSAUXCP accumulates the CPU auxiliary call processing occupancies and displays this amount as an integer. Each of these occupancies is the percentage of CPU time spent on the simplified-message desk interface (SMDI) incoming message handler processes. The system measures these occupancies in a given time sample. These processes are the processes in the auxiliary call processing scheduler class.

At the beginning of the transfer period, the system initializes CPSAUXCP to the current value of the CPU auxiliary call processing

occupancy. The system updates the occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time, the occupancy increases and the register CPSAUXCP accumulates the value.

To obtain the average CPU auxiliary call processing occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Office parameter AUXCP_CPU_SHARE in table OFCENG indicates percentage of CPU time allocated for the auxiliary call processing scheduler class.

Associated registers
None

Extension registers
None

Associated logs
None

CPSBKG

Register type
Peg

Description
CPSBKG accumulates the CPU background occupancies and displays this amount as an integer. Each of these occupancies is the percentage of CPU time spent on processes related to:

- the log system
- audits
- non-critical system maintenance
- non-guaranteed MAP
- operational measurements

The system measures those occupancies in a given time sample.

At the beginning of the transfer period, the system initializes register CPSBKG to the current value of the CPU background occupancy. The system updates the occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CPSBKG accumulates the value.

To obtain the average CPU background occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSCPOCC

Register type
Peg

Description
CPSCPOCC accumulates the CPU call processing occupancies and displays this amount as an integer. Each of these occupancies is the percentage of CPU time spent on call processing-related processes in a given time sample. These processes are processes in the following scheduler classes:

- high-priority call processing
- normal call processing
- deferrable call processing

At the beginning of the transfer period, the system initializes CPSCPOCC to the current value of the CPU call processing occupancy. The system updates the occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CPSCPOCC accumulates the value.

To obtain the average CPU call processing occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSDNC

Register type
Peg

Description
CPSDNC accumulates the CPU dynamic network controller (DNC) occupancies and displays this amount as an integer. Each of these occupancies is percentage of CPU time spent on Network Operations System (NOS) processes that communicate with a DNC. The system measures the occupancies in a given sample. These are the processes in the NOS file transfer scheduler classes.

At the beginning of the transfer period, the system initializes CPSDNC to the current value of the CPU DNC occupancy. The system updates occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases register CPSDNC accumulates the value.

To obtain the average CPU DNC occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSFORE

Register type
Peg

Description
CPSFORE accumulates the CPU front occupancies displays this amount as an integer. Each of these occupancies is the percentage of CPU time spent on system operations-related processes in a given time sample. These processes are processes in the system and system tools scheduler classes. These scheduler classes were earlier known as system7 and system6, in the sequence given.

At the beginning of the transfer period, the system initializes CPSFORE to the current value of the CPU front occupancy. The system updates the occupancy values from CPSTATUS data at 1 min intervals during

the transfer period. Each time the occupancy increases, register CPSFORE accumulates the value.

To obtain the average CPU front occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSGTERM

Register type
Peg

Description
CPSGTERM accumulates the CPU guaranteed terminal occupancies and displays this amount as an integer. Each of these occupancies is percentage of CPU time spent on guaranteed MAP terminals, guaranteed log devices, and the login process. The system measures those occupancies in a given time sample. These are processes in the guaranteed terminal scheduler class, earlier known as guaranteed background. Guaranteed terminal occupancy is at the cost of call processing.

At the beginning of the transfer period, the system initializes CPSGTERM to the current value of the CPU guaranteed terminal occupancy. The system indicates the occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CPSGTERM accumulates the value.

To obtain the average CPU guaranteed terminal occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Office parameter GUARANTEED_TERMINAL_CPU_SHARE in table OFCENG indicates percentage of CPU time allocated for the guaranteed terminal scheduler class.

Associated registers
None

Extension registers
None

Associated logs
None

CPSIDLE

Register type
Peg

Description
CPSIDLE accumulates the CPU idler occupancies and displays this amount as an integer. Each of these occupancies is the percentage of CPU time spent on the idler process, memory checksums, and call processing audits. The system measures these occupancies in a given time sample. These are processes in the idler scheduler class, earlier known as system 0.

At the beginning of the transfer period, the system initializes CPSIDLE to the current value of the CPU idler occupancy. The system updates the occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CPSIDLE accumulates the value.

To obtain the average CPU idler occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSMAINT

Register type
Peg

Description
CPSMAINT accumulates the CPU maintenance occupancies and displays this amount as an integer. Each of these occupancies is the percentage of CPU time spent on critical system maintenance

processes in a given one time sample. These are processes in the maintenance scheduler class.

At the beginning of the transfer period, the system initializes CPSMAINT to the current value of the CPU maintenance occupancy. The system updates occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CPSMAINT accumulates the value.

To obtain the average CPU maintenance occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSNETM

Register type
Peg

Description
CPSNETM accumulates the CPU network maintenance occupancies and displays this amount as an integer. Each of these occupancies is the percentage of CPU time spent on network maintenance processes in a given time sample. These are processes in the network maintenance scheduler class.

At the beginning of the transfer period, the system initializes CPSNETM to the current value of the CPU network maintenance occupancy. The system updates occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CPSNETM accumulates the value.

To obtain the average CPU network maintenance occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSOM

Register type
Peg

Description
CPSOM accumulates the CPU operational measurements (OM) occupancies and amount as an integer. Each of these occupancies is the percentage of CPU time spent on OM processes in a given time sample. These are processes in the guaranteed and not guaranteed OM scheduler classes.

At the beginning of the transfer period, the system initializes CPSOM to the current value of the CPU OM occupancy. The system updates the occupancy value from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CPSOM accumulates the value.

To obtain the average CPU OM occupancy for 1 min, divide is the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSSCHED

Register type
Peg

Description
CPSSCHED accumulates the CPU scheduler occupancies and displays this amount as an integer. Each of these occupancies is the percentage of CPU time the scheduler spends in a given time sample.

At the beginning of the transfer period, the system initializes CPSSCHED to the current value of the CPU scheduler occupancy. The system updates the occupancy values from CPSTATUS data at 1 min intervals during the transfer period. Each time the occupancy increases, register CPSSCHED accumulates the value.

To obtain the average CPU scheduler occupancy for 1 min, divide the holding register value by the transfer period. Measure the transfer period in minutes.

Associated registers
None

Extension registers
None

Associated logs
None

CPSSNIP

Register type
Peg

Description
CPSSNIP measures the CPU use of the SuperNode internet protocol (SNIP) scheduler class on SuperNode cores.

Note: This register does not apply to BRISC SuperNode cores.

Associated registers
None

Extension registers
None

Associated logs
None

CSMI

Description

OM group Call Screening, Monitoring, and Intercept (CSMI) stores the number of CSMI monitoring and intercept attempts and failures. The system assigns this feature for separate customer groups.

The following table lists the key and info fields associated with OM group CSMI.

Key field	Info field
None	OMIBNGINFO

The info field OMIBNGINFO is the customer group which field CUSTNAME in table CUSTENG defines. This info field can have only one customer name for each customer group. This info field can have a maximum of 4095 customer groups.

Related functional groups

There are no functional groups associated with OM group CSMI.

Registers

The following table lists the registers associated with OM group CSMI and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CSMI (Sheet 1 of 2)

Register name	Measures
PPUINT2W	Pay Per Use 2-way Call Interception Attempts
PPUINT3W	Pay Per Use 3-way Call Interception Attempts
PPUINTFL	Pay Per Use Interception Failure
PPUMONFL	Pay Per Use Monitoring Failure
PPUMONIT	Pay Per Use Monitoring Attempts
SUBINT2W	Subscriber 2-way Call Interception Attempts
SUBINT3W	Subscriber 3-way Call Interception Attempts
SUBINTFL	Subscriber Interception Failure

Registers for OM group CSMI (Sheet 2 of 2)

Register name	Measures
SUBMONFL	Subscriber Monitoring Failure
SUBMONIT	Subscriber Monitoring Attempts

PPUINT2W

Register type
Peg

Description
PPUINT2W counts Pay Per Use 2-way Call Interception Attempts.

Associated registers
None

Extension registers
None

Associated logs
None

PPUINT3W

Register type
Peg

Description
PPUINT3W counts Pay Per Use 3-way Call Interception Attempts.

Associated registers
None

Extension registers
None

Associated logs
None

PPUINTFL

Register type
Peg

Description
PPUINTFL counts Pay Per Use Interception Failures.

Associated registers
None

Extension registers
None

Associated logs
None

PPUMONFL

Register type
Peg

Description
PPUMONFL counts Pay Per Use Monitoring Failures.

Associated registers
CSLMBU records if console devices are manual busy.

Extension registers
None

Associated logs
None

PPUMONIT

Register type
Peg

Description
PPUMONIT counts Pay Per Use Monitoring Attempts.

Associated registers
None

Extension registers
None

Associated logs
None

SUBINT2W

Register type
Peg

Description
SUBINT2W counts 2-way Call Interception Attempts.

Associated registers
None

Extension registers
None

Associated logs
None

SUBINT3W

Register type
Peg

Description
SUBINT3W counts 3-way Call Interception Attempts.

Associated registers
None

Extension registers
None

Associated logs

SUBINTFL

Register type
Peg

Description
SUBINTFL counts Subscriber Interception Failure.

Associated registers
None

Extension registers
None

Associated logs
None

SUBMONFL

Register type
Peg

Description
SUBMONFL counts Subscriber Monitoring Failure.

Associated registers
None

Extension registers
None

Associated logs
None

SUBMONIT

Register type
Peg

Description
SUBMONIT counts Subscriber Monitoring Attempts.

Associated registers
None

Extension registers
None

Associated logs
None

CSL

Description

OM group Console Device Maintenance Summary (CSL) counts errors and faults, and records system or manual busy use for console devices. Console devices include teletypewriters and MAP terminals. Use the data collected by CSL to assess the performance of the console devices.

The following table lists the key and info fields associated with OM group CSL.

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with CSL:

- DMS-100 Local
- DMS-100/200 Local/Toll
- DMS-100/200 Local/Toll with TOPS
- DMS-200 Toll
- DMS-200 with TOPS
- DMS-100 Meridian
- DMS-MTX Mobile Telephone Exchange
- DMS-250 Toll/Tandem
- DMS-300 Gateway
- Meridian SL-100 PBX

Registers

The following table lists the registers associated with OM group CSL and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CSL

Register name	Measures
CSLERR	Console device errors
CSLFLT	Console device faults
CSLMBU	Console device manual busy use
CSLSBU	Console device system busy use

CSLERR

Register type
Peg

Description
CSLERR counts console device errors. The count includes errors that clear and errors that make a console device system busy.

The errors that CSLERR counts include

- transmission errors between the central control (CC) and the input/output device (IOD) controller that cause messages to rebound.
- time outs of an IOD controller before the controller returns a required response
- transmission of dataset-not-ready or bad-message responses by a device controller

For a single console device, the system attempts to clear up to five errors that occur between following maintenance audits. If a sixth error occurs, the system makes the console device system busy.

Associated registers
CSLFLT

Extension registers
None

Associated logs
IOD120, IOD306, IOD310, IOD311, IOGA101, IOGA105

CSLFLT

Register type
Peg

Description
CSLFLT counts faults that make a console device system busy. The faults that CLSFLT count include:

- console device errors that system action cannot clear
- the sixth error that occurs between following maintenance audits in a single console device

The system attempts to clear up to five errors that occur between following audits on a single console device. If a sixth error occurs, the system makes the console device system busy. The console device remains system busy or disconnects until manual or system interruption returns to service the console.

Associated registers
CSLERR

Extension registers
None

Associated logs
IOD119, IOD307, IOD308

CSLMBU

Register type
Usage

Scan rate
100 seconds

Description
CSLMBU records if console devices are manual busy.

Associated registers
CSLSBU

Extension registers
None

Associated logs
IOD303, IOD312

CSLSBU

Register type
Usage

Scan rate
100 seconds

Description
CSLSBU records if console devices are system busy.

Associated registers
CSLMBU

Extension registers
None

Associated logs
IOD304, IOD312

CTFP

Description

OM group Call Transfer Fraud Prevention (CTFP) provides information on the use of the CTFP functionality.

The following table lists the key and info fields associated with OM group CTFP:

Key field	Info field
CTFP	None

Related functional groups

There are no functional groups associated with OM group CTFP.

Registers

The following table lists the registers associated with OM group CTFP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CTFP

Register name	Measures
CTFPSCRN	Call Transfer Fraud Prevention Screening
CTFPTHRO	Call Transfer Fraud Prevention Throttling

CTFPSCRN

Register type
Peg

Description
The CTFP increments CTFPSCRN when the call drops due to call type screening.

Associated registers
None

Extension registers
None

Associated logs
CTFP

CTFPTHRO

Register type
Peg

Description
The CTFP increments CTFPTHRO when the call drops due to throttling.

Associated registers
None

Extension registers
None

Associated logs
CTFP

CTRYDIR

Description

OM group Country Direct (CTRYDIR) measures the number of country-direct CDIR calls, calls queued and calls served. The following table lists the key and info fields associated with OM group CTRYDIR.

Key field	Info field
None	None

Related functional groups

The TOPS Country Direct functional group increases with OM group CFRA.

Registers

The following table lists the registers associated with OM group CTRYDIR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CTRYDIR

Register name	Measures
CDCSAL	Country Direct Carrier Selection option ALLOW
CDCSBL	Country Direct Carrier Selection option BLOCK
CDCSSUB	Country Direct Carrier Selection option BLOCK
CDIRCO	Country Direct Call Origination
CDIRFL	Country Direct Failure
CDIRHA	Country Direct Handed Off to AABS
CDIRQD	Country Direct Queued
CDIRSV	Country Direct Served by an Operator
CDIRSN	Country Direct Served by an OSSAIN Service Node

CDCSAL

Register type
Peg

Description
CDCSAL counts the number of CDIR calls that have received carrier selection service resulting in the ALLOW option.

Associated registers
None

Extension registers
CDCSAL2

Associated logs
None

CDCSBL

Register type
Peg

Description
CDCSBL counts the number of CDIR calls that have received carrier selection service resulting in the BLOCK option.

Associated registers
None

Extension registers
CDCSBL2

Associated logs
None

CDCSSUB

Register type
Peg

Description
CDCSSUB counts the number of CDIR calls that have received carrier selection service resulting in the SUBST option.

Associated registers
None

Extension registers
CDCSSUB2

Associated logs
None

CDIRCO

Register type
Peg

Description
CDIRCO tracks how many calls are assigned the CDIR call origination type by datafill when the feature is SOC'd ON.

Associated registers
None

Extension registers
CDIRCO2

Associated logs
None

CDIRFL

Register type
Peg

Description
CDIRFL tracks the number of Country Direct calls that are signalled with no country code or carrier ID, or an undatafilled access code, country code, or carrier of origin where one was expected. Possible error conditions are described below:

- Invalid Access Code: If a call is marked Country Direct, but the digits at the beginning of the Country Direct digit stream are not datafilled in table CDACCESS
- Invalid Country Code: If the CDACCESS tuple for the appropriate access code has field CTRYCODE = Y, but the digits following the access code are not found in table CDCTRY
- Invalid Carrier ID: If the CDACCESS tuple for the appropriate access code has field CARRCODE = Y, but the digits following the country code, if there is one, or the access code are not found in table CDCARR

If any of the above conditions are met, the call is routed to treatment and CDIRFL is pegged, indicating an error in the Country Direct digit stream.

Associated registers
None

Extension registers
CDIRFL2

Associated logs
TOPS126, TRK138

CDIRHA

Register type
Peg

Description
CDIRHA tracks the number of Country Direct calls that are handed off to AABS by an operator.

Associated registers
None

Extension registers
CDIRHA2

Associated logs
None

CDIRQD

Register type
Peg

Description
CDIRQD tracks the number of Country Direct calls that can be handled by an operator or an OSSAIN service node. This includes calls that are placed in queue and calls that are immediately handled directly by an operator or OSSAIN service node.

Associated registers
None

Extension registers
CDIRQD2

Associated logs
None

CDIRSV

Register type
Peg

Description
CDIRSV tracks the number of Country Direct calls that are served by an operator.

Associated registers
None

Extension registers
CDIRSV2

Associated logs
None

CDIRSN

Register type
Peg

Description
CDIRSN tracks the number of TOPS Country Direct calls that are routed to an OSSAIN Service Node.

Associated registers
None

Extension registers
CDIRSN2

Associated logs
None

CWTPOTS

Description

OM group Call Waiting in the Plain Old Telephone Service (POTS) environment (CWTPOTS) measures attempts and failures to activate the POTS Call Waiting (CWT) feature. To determine how often Call Waiting is in use and if hardware and software resources are correctly equipped, use CWTPOTS.

The following table lists the key and info fields associated with OM group CWTPOTS.

Key field	Info field
None	None

Related functional groups

All DMS offices with the POTS Call Waiting feature are associated with OM group CWTPOTS.

Registers

The following table lists the registers associated with OM group CWTPOTS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group CWTPOTS

Register name	Measures
CCWPATT	Cancel Call Waiting Attempt
CCWPNOWT	Call Waiting Attempt Failure, Call Waiting Cancelled
CWTPABDN	Call Waiting Attempt Abandoned
CWTPATT	Call Waiting Attempts
CWTPDENY	Call Waiting Attempt Failure, Feature Restrictions
CWTPOVFL	Call Waiting Attempt Failure, Lack of Resources

CCWPATT

Register type
Peg

Description
CCWPATT increases when the Call Waiting feature cancels.

Associated registers
None

Extension registers
None

Associated logs
None

CCWPNOWT

Register type
Peg

Description
CCWPNOWT increases when a calling party attempts to use Call Waiting feature but cannot because called party cancels Call Waiting.

If the Call Waiting Auto-Suppression (CWAS) feature is active, register CCWPNOWT counts the number of termination attempts. The register counts the termination attempts on a CWT-denied Secondary Directory Number (SDN).

The system call routes to busy line treatment.

Associated registers
None

Extension registers
None

Associated logs
None

CWTPABDN

Register type
Peg

Description
CWTPABDN increases when the calling party goes on-hook before the called party flashes to answer.

Associated registers
None

Extension registers
None

Associated logs
None

CWTPATT

Register type
Peg

Description
CWTPATT increases when a subscriber makes a call to a directory number with the CallWaiting feature. The register increases if another current call uses the directory number.

Associated registers
None

Extension registers
None

Associated logs
None

CWTPDENY

Register type
Peg

Description
CWTPDENY counts attempts to use the Call Waiting feature that fail because of feature interactions.

Associated registers
None

Extension registers
None

Associated logs
LINE138

CWTPOVFL

Register type
Peg

Description
CWTPOVFL counts attempts to use the Call Waiting feature that fail because of not enough hardware or software resources.

Associated registers
None

Extension registers
None

Associated logs
LINE138

DAISGEN

Description

OM group General Data Access/information Services (DIASGEN) provides information on data access/information services (DAIS) in the enhanced input/output controller (EIOC). DAISGEN counts the following activities:

- system events
- connect events
- refuse events
- release events
- not-finish events
- abort events
- protocol errors
- system errors

The following table lists the key and info fields associated with OM group DAISGEN.

Key field	Info field
None	None

Related functional groups

The functional group EIOC is associated with OM group DAISGEN.

Registers

The following table lists the registers associated with OM group DAISGEN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DAISGEN (Sheet 1 of 2)

Register name	Measures
DAISABEV	Data access/information services (DAIS) abort events
DAISCOEV	DAIS connect events
DAISNFEV	DAIS not-finish events

Registers for OM group DAISGEN (Sheet 2 of 2)

Register name	Measures
DAISPRER	DAIS protocol errors
DAISREEV	DAIS refuse events
DAISRLEV	DAIS release events
DAISSYER	DAIS system errors
DAISSYEV	DAIS system events

DAISABEV

Register type
Peg

Description
DAISABEV counts abort events that occur in DAIS in the EIOC. An abort event occurs when a DAIS link sends or receives a system disconnect request, and receives or sends confirmation.

Associated registers
None

Extension registers
None

Associated logs
DAIS297

DAISCOEV

Register type
Peg

Description
DAISCOEV counts connect events that occur in DAIS in the EIOC.

Associated registers
None

Extension registers
None

Associated logs
DAIS201

DAISNFEV

Register type
Peg

Description
DAISNFEV counts not-finish events that occur in DAIS in the EIOC.

A not-finish event occurs when a DAIS link sends a release request and receives a release reject. A not-finish event also occurs when a DAIS link receives a release request and sends a release reject.

Associated registers
None

Extension registers
None

Associated logs
DAIS204

DAISPRER

Register type
Peg

Description
DAISPRER counts protocol errors that occur in DAIS.

Associated registers
None

Extension registers
None

Associated logs
DAIS298

DAISREEV

Register type
Peg

Description
DAISREEV counts refuse events that occur in DAIS in the EIOC.

Associated registers
None

Extension registers
None

Associated logs
DAIS202

DAISRLEV

Register type
Peg

Description
DAISRLEV counts release events that occur in DAIS in the EIOC. A release event occurs when a DAIS link sends a release request and receives confirmation.

Associated registers
None

Extension registers
None

Associated logs
DAIS203

DAISSYER

Register type
Peg

Description
DAISSYER counts system errors that occur in DAIS.

Associated registers
None

Extension registers
None

Associated logs
DAIS299

DAISSYEV

Register type
Peg

Description
DAISSYEV counts system events that occur in DAIS in the EIOC.

Associated registers
None

Extension registers
None

Associated logs
DAIS200

DALINK

Description

OM group Directory Assistance (DA) link (DALINK) counts successful and unsuccessful attempts of the Digital Multiplex System (DMS) central control (CC) to send messages to the Directory Assistance System (DAS). It also counts messages that are received by the DAS from the DMS CC.

The following table lists the key and info fields associated with OM group DALINK (TOPS offices with release NA006 and higher).

Key field	Info field
Database Instance ([TOPSVR1, TOPSVR2] [0-15])	None

Note: The addition of this key field allows the display of a tuple for each database instance that is defined in table SERVICES, when the OMSHOW command is issued.

The following table lists the key and info fields associated with OM group DALINK (TOPS offices with a release below NA006).

Key field	Info field
Range of multiprotocol controlled datalinks datafilled in table SERVICES. Valid entries are MPC1, MPC2 and STUB.	None

Related functional groups

Functional group Directory Assistance (OSDA0001) is associated with OM group DALINK.

Registers

The following table lists the registers associated with OM group DALINK and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DALINK

Register name	Measures
MSGRCVD	Messages received
MSGSENT	Messages sent
MSGSNDFL	Messages send failure
MSGSNDSC	Messages send successfully

MSGRCVD

Register type
Peg

Description
MSGRCVD is incremented when a message is received by the DMS CC from the DAS during a DA call.

Associated registers
None

Extension registers
MSGRCVD2

Associated logs
None

MSGSENT

Register type
Peg

Description
MSGSENT is incremented when an attempt is made to send a message from the DMS CC to the DAS during a DA call.

Associated registers
None

Extension registers
MSGSENT2

Associated logs
None

MSGSNDFL

Register type
Peg

Description
MSGSNDFL is incremented when an attempt to send a message from the DMS CC to the DAS fails because of a datalink failure.

Associated registers
None

Extension registers
None

Associated logs
None

MSGSNDSC

Register type
Peg

Description
MSGSNDSC is incremented when a message is successfully sent from the DMS CC to the DAS during a DA call.

Associated registers
None

Extension registers
MSGSNSC2

Associated logs
None

DAMISC

Description

OM group Directory Assistance (DA) Miscellaneous (DAMISC) counts miscellaneous events relating to Traffic Operator Position System (TOPS) DA service.

The registers in DAMISC count:

- auto-intercept failures
- communication failures during a call to the Directory Assistance System (DAS)
- intercept float timeouts
- Mechanized Calling Card Service (MCCS) calls that are successfully completed
- Automated Coin Toll Service (ACTS) calls that are successfully completed
- 0+ DA calls that are given Automated Alternate Billing Service (AABS)
- Successful/unsuccessful attempts to transfer to an OSSAIN service node

The following table lists the key and info fields associated with OM group DAMISC.

Key field	Info field
None	DBINST_REGISTERINFO

Related functional groups

The following functional groups are associated with OM group DAMISC:

- Operator Services Directory Assistance (OSDA0001)
- Enhanced Services (ENSV0001)

Registers

The following table lists the registers associated with OM group DAMISC and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DAMISC

Register name	Measures
AUTINTFL	Auto-intercept failures
DAAABSUC	Directory assistance Automated Alternate Billing Service successes
DAACTSUC	Directory assistance (DA) Automated Coin Toll Service successes
DAMCCSUC	Directory assistance (DA) Mechanized Call Card Service (MCCS) successes
INTFLTTO	Intercept float timeout
OHIMPOSE	Operator handling imposed
XFERCNTX	Transfer Context to OSSAIN Success
XFERFAIL	Transfer Context to OSSAIN Failure

AUTINTFL

Register type
Peg

Description
AUTINTFL is incremented when the DAS fails to acknowledge the call begin message sent at the beginning of an auto-intercept call.

Associated registers
None

Extension registers
None

Associated logs
None

DAAABSUC

Register type
Peg

Description
DAAABSUC is incremented when AABS successfully obtains billing information for a 0+ DA call on a TOPS Multipurpose (MP) system.

Associated registers
None

Extension registers
None

Associated logs
None

DAACTSUC

Register type
Peg

Description
DAACTSUC is incremented when Automated Coin Toll Service (ACTS) successfully charges for a DA call.

Associated registers
None

Extension registers
None

Associated logs
None

DAMCCSUC

Register type
Peg

Description
DAMCCSUC is incremented when the MCCS successfully obtains billing information for a DA call.

Associated registers
None

Extension registers
None

Associated logs
None

INTFLTTO

Register type
Peg

Description
INTFLTTO is incremented when the DMS CM fails to receive a position request or audio response unit (ARU) request from the DAS before the intercept float timeout, and after the CM receives a position float (POS FLOAT) message from the DAS.

This register applies to intercept Operator Number Identification (ONI) calls or automatic number identification failed (ANIF) calls.

Note: The intercept float timeout is specified by parameter FLOAT_INT_TIMEOUT in table VROPT.

Associated registers
None

Extension registers
None

Associated logs
None

OHIMPOSE

Register type
Peg

Description
OHIMPOSE is incremented when communication with the DAS is lost during a call. The call is handled by an operator.

Associated registers
None

Extension registers
None

Associated logs
None

XFERCNTX

Register type
Peg

Description
XFERCNTX measures the number of times the DA system is successful in transferring a DA call to OSSAIN.

Associated registers
XFERFAIL

Extension registers
None

Associated logs
None

XFERFAIL

Register type
Peg

Description
XFERFAIL measures the number of times the DA system is unsuccessful in transferring a DA call to OSSAIN.

Associated registers
XFERCNTX

Extension registers
None

Associated logs
None

DB

Description

The DB OM group provides performance data regarding the utilization of cached database resources. These measurements provide valuable raw data useful for engineering the sizes of the caches for various system configurations.

The cached resources are of two kinds: connections and statements. Creating these resources is expensive in terms of CPU utilization, both on the database server and on the network elements. Caching the resources avoids the work of creating and destroying them repeatedly.

The DB OM group is keyed by database instance number; there will be either one or two rows (with key values "0", and "1", respectively) in the group.

The following table lists the key and info fields associated with OM group DB.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group DB:

- All MCS network elements

Registers

The following table lists the registers associated with OM group DB and what they measure. For a description of a register, click on the register name.

Registers for OM group DB

Register name	Measures
connectionsServed	The number of successful requests for cached connections performed by application software.
connectionsInUseHigh	High water mark for connectionsInUse.

Registers for OM group DB

Register name	Measures
connectionsInUse	The number of connections currently in use by application software.
connectionsInUseLow	Low water mark for connectionsInUse.
connectionsAttempted	The number of requests (successful or not) for cached connections performed by application software.
threadsWaitingHigh	High water mark for threadsWaiting
threadsWaiting	The number of application threads waiting for a connection to become available.
threadsWaitingLow	Low water mark for threadsWaiting
statementCacheHit	The number of times a prepared statement was found in the statement cache.
statementCacheMiss	The number of times a prepared statement was not found in the statement cache.

connectionsServed

Register type
Peg

Description
The number of successful requests for cached connections performed by application software.

Associated registers
connectionsAttempted

Extension registers
None

Associated logs
None

connectionsInUseHigh

Register type
Usage

Scan rate

Description
High water mark for connectionsInUse.

Associated registers
connectionsInUse, connectionsInUseLow

Extension registers
None

Associated logs
None

connectionsInUse

Register type
Watermark

Scan rate

Description
The number of connections currently in use by application software.

Associated registers
connectionsInUseHigh, connectionsInUseLow

Extension registers
None

Associated logs
None

connectionsInUseLow

Register type
Usage

Scan rate

Description
Low water mark for connectionsInUse.

Associated registers
connectionsInUseHigh, connectionsInUse

Extension registers
None

Associated logs
None

connectionsAttempted

Register type
Peg

Description
The number of requests (successful or not) for cached connections performed by application software.

Associated registers
connectionsServed

Extension registers
None

Associated logs
None

threadsWaitingHigh

Register type
Usage

Scan rate

Description
High water mark for threadsWaiting

Associated registers
threadsWaiting, threadsWaitingLow

Extension registers
None

Associated logs
None

threadsWaiting

Register type
Watermark

Scan rate

Description
The number of application threads waiting for a connection to become available.

Associated registers
threadsWaitingHigh, threadsWaitingLow

Extension registers
None

Associated logs
None

threadsWaitingLow

Register type
Usage

Scan rate

Description
Low water mark for threadsWaiting

Associated registers
threadsWaitingHigh. threadsWaiting

Extension registers
None

Associated logs
None

statementCacheHit

Register type
Peg

Description
The number of times a prepared statement was found in the statement cache.

Associated registers
statementCacheMiss

Extension registers
None

Associated logs
None

statementCacheMiss

Register type
Peg

Description
The number of times a prepared statement was not found in the statement cache.

Associated registers
statementCacheHit

Extension registers
None

Associated logs
None

DBPRFM

Description

The DBPRFM OM group provides performance data regarding the amount of (elapsed) time required to perform database queries and updates.

Timestamps are taken immediately before and after the execution of each database operation. The difference between these timestamps determines which histogram bin (represented by a row in the group) to which the operation should be assigned.

The DBPRMF OM group is keyed by a histogram bin name describing the length of time required for an operation.

The following table lists the key and info fields associated with OM group DBPRFM.

Key field	Description
0:0-5ms	Operations taking less than 5 ms.
1:5-10ms	Operations taking between 5 and 10 ms.
2:10-25ms	Operations taking between 10 and 25 ms.
3:25-50ms	Operations taking between 25 and 50 ms.
4:50-100ms	Operations taking between 50 and 100 ms.
5:100-250ms	Operations taking between 100 and 250 ms.
6:250-500ms	Operations taking between 250 and 500 ms.
7:500-1000ms	Operations taking between 500 and 1000 ms.
8:1000-ms	Operations taking more than 1000ms.

Related functional groups

The following functional groups are related to OM group DBPRFM:

- All MCS network elements

Registers

The following table lists the registers associated with OM group DBPRFM and what they measure. For a description of a register, click on the register name.

Registers for OM group DBPRFM

Register name	Measures
execute	The number of stored procedure executions.
query	The number of queries.
update	The number of updates (e.g. SQL insert, update, delete).
batch	The number of batch operations.

execute

Register type
Peg

Description
The number of stored procedure executions.

Associated registers
None

Extension registers
None

Associated logs
None

query

Register type
Peg

Description
The number of queries.

Associated registers
None

Extension registers
None

Associated logs
None

update

Register type
Peg

Description
The number of updates (e.g. SQL insert, update, delete).

Associated registers
None

Extension registers
None

Associated logs
None

batch

Register type
Peg

Description
The number of batch operations.

Associated registers
None

Extension registers
None

Associated logs
None

DBSummary

Description

The DB Summary OM Group captures general statistics for the database instance.

The total disk space is the estimated disk space allocated to the database instance as obtained from the SNMP RDBMS MIB variable “rdbmsDbInfoSizeAllocated.”

The used disk space is the estimated disk space that is in use by the database instance as obtained from the SNMP MIB variable “rdbmsDbInfoSizeAllocated.”

The following table lists the key and info fields associated with OM group DB Summary.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group DB Summary:

- Database

Registers

The following table lists the registers associated with OM group DB Summary and what they measure. For a description of a register, click on the register name.

Registers for OM group DB Summary

Register name	Measures
totalDiskSpace	total disk space
minDiskSpaceUtilizationValue	minimum disk space utilization
medianDiskSpaceUtilizationValue	median disk space utilization
maxDiskSpaceUtilizationValue	max disk space utilization

totalDiskSpace

Register type
Usage

Scan rate

Description
Tracks the estimated disk space that has been allocated to the database instance. This register reflects the latest sampled value during a given OM collection period.

Associated registers
minDiskSpaceUtilizationValue, medianDiskSpaceUtilizationValue, maxDiskSpaceUtilizationValue

Extension registers
None

Associated logs
DBMN 401

minDiskSpaceUtilizationValue

Register type
Usage

Scan rate

Description
In a given OM collection period, this register tracks the minimum sampled value of estimated used disk space expressed as a percentage of the estimated allocated disk space.

Associated registers
medianDiskSpaceUtilizationValue, maxDiskSpaceUtilizationValue, totalDiskSpace

Extension registers
None

Associated logs
DBMN 401

medianDiskSpaceUtilizationValue

Register type
Usage

Scan rate

Description
In a given OM collection period, this register tracks the median sampled value of estimated used disk space expressed as a percentage of the estimated allocated disk space.

Associated registers
minDiskSpaceUtilizationValue, maxDiskSpaceUtilizationValue, totalDiskSpace

Extension registers
None

Associated logs
DBMN 401

maxDiskSpaceUtilizationValue

Register type
Usage

Scan rate

Description
In a given OM collection period, this register tracks the maximum sampled value of an estimated used disk space expressed as a percentage of the estimated allocated disk space.

Associated registers
minDiskSpaceUtilizationValue, medianDiskSpaceUtilizationValue, totalDiskSpace

Extension registers
None

Associated logs
DBMN 401

Thresholding and Alarms

Thresholds for DBMN 401 alarms may be associated with disk space utilization for a database instance. The thresholds and associated alarm severity are configured at the database monitor corresponding to the database instance.

The DBMN 401 alarms are not enabled by default because the Oracle database is currently configured to automatically grow in size as needed. The alarms may still however be enabled against specified thresholds if so desired.

DCM

Description

OM group Digital Carrier Module Maintenance summary (DCM) provides maintenance measurements for digital carrier modules (DCM).

DCM contains nine registers that count:

- errors detected in-service DCMs
- circuit diagnostics
- DCMs that become manual busy and system busy
- terminals that the system cuts off because DCMs become manual busy or system busy
- outside plant circuit failures

Two usage registers record if DCMs are system busy or manual busy.

The following table lists the key and info fields associated with OM group DCM.

Key field	Info field
None	None

Related functional groups

There is no functional groups associated with OM group DCM.

Registers

The following table lists the registers associated with OM group DCM and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DCM (Sheet 1 of 2)

Register name	Measures
DCMCCTDG	Digital carrier module (DCM) circuit diagnostics run
DCMCCTFL	Digital carrier module (DCM) circuit diagnostics failed

Registers for OM group DCM (Sheet 2 of 2)

Register name	Measures
DCMCCTOP	Digital carrier module (DCM) circuit diagnostics outside plant
DCMERR	Digital carrier module (DCM) errors
DCMFLT	Digital carrier module (DCM) faults
DCMMBP	Digital carrier module (DCM) transitions to manual busy
DCMMBTCO	Digital carrier module (DCM) manual busy terminals cut off
DCMMBU	Digital carrier module (DCM) manual busy usage
DCMSBP	Digital carrier module (DCM) transitions to system busy
DCMSBTCO	Digital carrier module (DCM) system busy terminals cut off
DCMSBU	Digital carrier module (DCM) system busy usage

DCMCCTDG

Register type
Peg

Description
DCMCCTDG increases when the system sends a DMC trunk to maintenance software because of repeated problems during call processing. The maintenance software checks if:

- the system removes the DCMs DS-1 trunk card
- the DS-1 set of cards has an alarm in the local group or the remote carrier group

Associated registers
The following registers are associated with DCMCCTDG:

- PM_PMCCTDG, which increases when the system sends a DCM trunk to maintenance software because of repeated problems during call processing
- PM_PMTCCTDG, which is the total of register PM_PMCCTDG for the peripheral module (PM) type.

Extension registers
None

Associated logs
None

DCMCCTFL

Register type
Peg

Description
Register DCMCCTFL increases when:

- the system refers a trunk on a DCM to maintenance software for checking because of repeated problems during call processing
- the system removed the related DS-1 line card
- the DS-1 set of cards has an alarm in the local group or the remote carrier group

Associated registers
The following registers are associated with DCMCCTFL:

- PM_PMCCTFL, which increases when:
  - — the system sends a DCM trunk to maintenance software because of repeated problems during call processing
  - — the system removed the related DS-1 line card
  - — the DS-1 set of cards has an alarm in the local group or the remote carrier
- PMTYP_PMTCCTFL, which is the total of register PM_PMCCTFL for the peripheral module (PM) type.

Extension registers
None

Associated logs
None

DCMCCTOP

Register type
Peg

Description
DCMCCTOP counts outside plant circuit failures that diagnostics called by the signaling test system detect. Register DCMCCTOP increases when the originating office does not receive a start-dial or wink signal from the far-end office. The start-dial responses to the off-hook signal that the originating office sends.

DCMCCTOP increases when the diagnostic first detects a fault. Register DCMCCTOP does not increase when the diagnostic detects the fault on subsequent retests.

Associated registers
The following registers are associated with DCMCCTOP:

- PM_PMCCTOP, which counts outside plant circuit failures diagnostics called by the signaling test system detects. Register PMCCTOP increases when the originating office does not receive a start-dial or wink signal from the far-end office. The start-dial or wink signal are responses to the off-hook signal that the originating office sends.
- PMTYP_PMTCCTOP, which is the total of register PM_PMCCTOP for the peripheral module (PM) type.

Extension registers
None

Associated logs
None

DCMERR

Register type
Peg

Description
DCMERR counts errors that the system detects in an in-service DCM. Register DCMERR increases when an in-service DCM:

- reports a software error, a RAM parity failure, a DCM firmware error, or DCM controller message congestion
- experiences an integrity failure
- fails a test during a routine or initializing audit

- raises a WAI (who-am-I) flag that indicates that processing in the DCM failed completely
- fails to respond to messages

DCMERR increases without regard for if the system takes action on the error.

Associated registers
The following registers are associated with DCMERR:

- PM_PMERR, which counts errors that the system detects in an in-service peripheral module (PM)
- PMTYP_PMTERR, which is the total of register PM_PMERR for the peripheral module (PM) type.

Extension registers
None

Associated logs
None

DCMFLT

Register type
Peg

Description
DCMFLT counts DCM errors that make the DCM system busy pending manual interruption or a successful system-initiated recovery attempt. Register DCMFLT increases with errors that register DCMERR increased with earlier.

Associated registers
The following registers are associated with DCMFLT:

- PM_PMFLT, which counts peripheral module (PM) errors that make the PM system busy pending manual interruption or successful system-initiated recovery attempt
- PMTYP_PMTFLT, which is the total of register PM_PMFLT for the peripheral module (PM) type

Extension registers
None

Associated logs
None

DCMMBP

Register type
Peg

Description
DCMMBP counts digital carrier modules (DCM) that are in-service or in in-service trouble, and become manual busy.

Associated registers
The following registers are associated with DCMMBP:

- PM_PMMBP, which counts peripheral modules (PM) that are in-service or in-service trouble, and become manual busy
- PMTYP_PMTMBP, which is the total of register PM_PMMBP for the peripheral module (PM) type

Extension registers
None

Associated logs
None

DCMMBTCO

Register type
Peg

Description
DCMMBTCO counts terminals that the system cut off when the system makes an in-service DCM manual busy.

Associated registers
The following registers are associated with DCMMBTCO:

- PM_PMMBTCO, which counts terminals that the system cut off when the system makes an in-service peripheral module (PM) manual busy
- PMTYP_PMTMBTCO, which is the total of register PM_PMMBTCO for the peripheral module (PM) type

Extension registers
None

Associated logs
None

DCMMBU

Register type
Usage

Scan rate
100 seconds

Description
DCMMBU records if a DCM is manual busy.

Associated registers
The following registers are associated with DCMMBU:

- PM_PMMMBU, which records if a peripheral module (PM) is manual busy. Register PMMMBU is a usage register.
- PMTYP_PMTMMBU, which is the total of register PM_PMMMBU for the PM type

Extension registers
None

Associated logs
None

DCMSBP

Register type
Peg

Description
DCMSBP counts digital carrier modules (DCM) that are in-service or in in-service trouble, and become system busy.

Associated registers
The following registers are associated with DCMSBP:

- PM_PMSBP, which counts peripheral modules (PM) that are in-service or in-service trouble, and become system busy
- PMTYP_PMTTSBP, which is the total of register PM_PMSBP for the PM type

Extension registers
None

Associated logs
None

DCMSBTCO

Register type
Peg

Description
DCMSBTCO counts terminals that are call processing busy or call processing busy deload. This register counts these terminals when the DCM C-side changes state to busy from an in-service or in-service trouble state. C-side busy is the state on the DCM before the DCM becomes system busy.

Associated registers
The following registers are associated with DCMSBTCO:

- PM_PMSBTCO, which counts terminals that are call processing busy or call processing busy deload. This register counts the terminals when the peripheral module (PM) C-side busy state are from an in-service or in-service trouble state. C-side busy is the state of the PM before the PM becomes system busy.
- PMTYP_PMTSBTCO, which is the total of register PM_PMSBTCO for the PM type

Extension registers
None

Associated logs
None

DCMSBU

Register type
Usage

Scan rate
100 seconds

Description
DCMSBU records if a DCM is system busy. The system makes a DCM system busy if:

- the DCM fails a routine audit
- message paths to the DCM are not available
- the system receives a minimum of 200 problem reports the DCM in one 10-minute audit period

The system tests system busy DCM at 1-minute intervals in an attempt to restore the DCMS.

Associated registers

The following registers are associated with DCMSBU:

- PM_PMMSBU, which records if a peripheral module (PM) is system busy. Register PMMSBU is a usage register
- PMTYP_PMTMSBU, which is the total of register PM_PMMSBU for the PM type

Extension registers

None

Associated logs

None

DCRDEST

Description

OM group Dynamically Controlled Routing Destination (DCRDEST) provides measurements for the Dynamically Controlled Routing (DCR) feature for each office destination.

The DCR feature provides tandem routes for toll calls. The DCR feature is for calls that must go to a switch one or two links away from the originating switch. A network processor (NP) computes different tandem routes, and recommends the best route.

At normal intervals, each switch with the DCR feature sends trunk switch measurements to the NP. The NP indicates that calls to go to a DCR toll switch follow a fixed route. The calls can continue on the fixed route or go to a different tandem route. The system can block the calls.

The system provides DCRDEST for all DMS-100 Family switches with the DCR feature.

The following table lists the key and info fields associated with OM group DCRDEST.

Key field	Info field
NETNAME$DEST_NODE_NAME is the office name of a destination that is accessible with links from the office.	None

Enter data in four tables: DESTKEY, DESTNODE, DCROPT, and TKTONODE.

Table DESTKEY stores all DCR destinations, like destinations two or more DCR links away from the switch.

Table DESTNODE contains a tuple for every DCR destination that is one or two DCR links away from the switch.

The operating company uses table DCROPT to control the different modes of operation that the DCR package introduces.

Table TKTONODE lists the trunk group common language location identifiers (CLLI) of all incoming and two-way trunks. The system uses

these trunks for DCR. This table also lists the CLLI of the originating office for each DCR trunk.

Related functional groups

There are no functional groups associated with OM group DCRDEST.

Registers

The following table lists the registers associated with OM group DCRDEST and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DCRDEST

Register name	Measures
BLKRECMD	NP block call recommendation
CNTRECMD	NP CONT call recommendation
DRTEOVF	First offered DCR call overflows
FRSTOFRD	First offered DCR calls
RECMDOVF	NP recommended route overflows

BLKRECMD

Register type
Peg

Description
BLKRECMD counts DCR calls that the system blocks on the recommendation of the network processor (NP). The system routes these calls to generalized no-circuit treatment (GNCT).

Associated registers
The following registers are associated with BLDRECMD:

- DCRMISC_DCRBLK, which counts DCR calls that the system blocks because of a BLOCK recommendation from the NP. This register also counts DCR calls that the system blocks in the exceptional route list.
- OFZ2 and SOTS, which provide information on the cause of the GNCT. These registers provide information for outgoing trunks or for the outgoing side of two-way trunks.

Extension registers
None

Associated logs
LOG138

CNTRECMD

Register type
Peg

Description
CNTRECMD counts DCR calls that the system continues to route with the exceptional route on the recommendation of the network processor. The system routes these calls to the exceptional route list for the correct DCR destination.

Associated registers
None

Extension registers
None

Associated logs
None

DRTEOVF

Register type
Peg

Description
DRTEOVF counts first-offered DCR calls that overflow from the direct link. The direct link consists of the direct routes from the originating switch to the DCR destination switch. If the DCR is turned on in the switch, calls that this register counts follow the NP tandem recommendation.

Associated registers
DRK_NOVFLATB, which counts calls that overflow a trunk group and that the system routes forward because an idle trunk is not available

Extension registers
None

Associated logs
None

FRSTOFRD

Register type
Peg

Description
FRSTOFRD counts first-offered DCR calls. First-offered DCR calls originate at a one toll switch and are to go to another toll switch. The calls continue toward another toll switch. The number of DCR links between the switches does not determine if the calls continue. FRSTOFRD continues to keep a total, if the DCR routing is or is not deactivated.

Associated registers
TRK_NATTMPT, which counts outgoing calls that the system routes to the trunk group

Extension registers
None

Associated logs
None

RECMDOVF

Register type
Peg

Description
RECMDOVF counts calls offered to a DCR tandem that overflow the first recommended tandem route. The DCR tandem traffic consists of calls that the path recommended by the network processor, serves. Traffic offered to a DCR tandem is incoming on DCR trunks, or fills from direct routes.

The system routes calls, that this register counts, to the exceptional route list for the correct DCIR destination. If an exceptional route list is not present, or trunks are not available, the system routes the calls to generalized no-treatment (GNCT).

Associated registers
The following registers are associated with RECMDOVF:

- DCRLINK_FRSTLOVF, which counts tandem DCR calls that overflow the first link of the two link recommended path
- TRK_NOVFLATB, which counts calls that overflow the trunk group, and that the system forwards because an idle trunk is not available

Extension registers
None

Associated logs
None

DCRICTRK

Description

OM group Dynamically Controlled Routing Incoming Trunk (DCRICTRK) provides measurements for Dynamically Controlled Dynamically Controlled Routing (DCR) for each incoming trunk group.

Dynamically Controlled Routing is a feature that recommends tandem routes for toll calls that the system routes to an exact toll switch. This toll switch is one or two links away from the originating toll switch. A network processor (NP) computes other tandem routes, and recommends the best route.

At normal intervals, each switch with the DCR feature sends its trunk measurements to the NP. The NP recommends that calls for a DCR toll switch continue on the fixed route or go to another tandem route. The system can block the calls.

DCRICTRK is provided for all DMS-100 switches with the Dynamically Controlled Routing feature.

The following table lists the key and info fields associated with OM group DCRICTRK.

Key field	Info field
COMMON_LANGUAGE_NAME identifies all trunk groups in the switch. Register DCRICTRK includes incoming or two-way trunk groups you can enter in field TKKEY of table TKTONODE as DCR trunk groups. Enter a maximum of 2048 trunk groups as DCR trunk groups.	None

Enter data in four tables: DESTKEY, DESTNODE, DCROPT, and TKTONODE.

Table DESTKEY stores all DCR destinations, like destinations two or more DCR links away from the switch.

Table DESTNODE contains a tuple for every DCR destination that is one or two DCR links away from the switch.

The operating company uses table DCROPT to control the different modes of operation that the DCR package introduces.

Table TKTONODE lists the trunk group common language location identifiers (CLLI) of all incoming and two-way trunks. The system uses these trunks for DCR. This table also lists the CLLI of the originating office for each DCR trunk group.

Related functional groups

There are no functional groups associated with OM group DCRICTRK.

Registers

The following table lists the registers associated with OM group DCRICTRK and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DCRICTRK

Register name	Measures
DCRTAND	Incoming dynamically controlled routing (DCR) tandem attempts

DCRTAND

Register type
Peg

Description
DCRTAND counts incoming DCR calls that attempt to use the DCR switch as a tandem office. DCRTAND continues to count, when DCR routing is deactivated.

DCRTAND increases at the routing stage so that the register can use the CI command TRAVER (translation and routing verification). The system uses the CI command TRAVER with the no trace (NT) option.

Associated registers
The following registers are associated with DCRICTRK:

- TRK_NATTMPT, which counts outgoing calls that the system routes to the trunk group
- DCRLINK_SCNDLOFR, which counts tandem DCR calls that the register offers to the second link of the two-link recommended path

Extension registers
None

Associated logs
None

DCRLINK

Description

OM group Dynamically Controlled Routing link status (DCRLINK) provides measurements for the Dynamically Controlled Routing (DCR) feature in each toll link.

The DCR feature provides tandem routes for toll calls. These toll calls are for a toll switch that is one or two links away from the originating toll switch. A network processor (NP) computes other possible tandem routes, and recommends the route that can succeed.

At normal intervals, each switch with the DCR feature sends the trunk measurements to the NP. The NP recommends a route for calls for a DCR toll switch.

The NP recommends one of the following routes:

- that the calls continue on the fixed route
- that the system route the calls to another tandem route
- that the system block the calls

The following table lists the key and info fields associated with OM group DCRLINK.

Key field	Info field
The NETNAME$DEST_NODE_NAME identifies the office names of the toll destinations that are accessible with toll links from the switch. The user assigns office names in field DESTKEY of table DESTKEY. The field contains only the destinations that are one link away from the switch.	None

Enter data in four tables: DESTKEY, DESTNODE, DCROPT, and TKTONODE.

Table DESTKEY stores all DCR destinations, like destinations two or more DCR links away from the switch.

Table DESTNODE contains a tuple for every DCR destination that is one or two DCR links away from the switch.

The operating company uses table DCROPT to control the different modes of operation that the DCR package introduces.

Table TKTONODE lists the trunk group common language location identifiers (CLLI) of all incoming and two-way trunks. The system uses these trunks for DCR. This table also lists the CLLI of the originating office for each DCR trunk group.

Related functional groups

All DMS-100 switches with the DCR feature are associated with the OM group DCRLINK.

Registers

The following table lists the registers associated with OM group DCRLINK and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DCRLINK

Register name	Measures
FRSTLOFR	First link offered DCR calls
FRSTLOVF	First link offered DCR call overflows
SCNDLOFR	Second link offered DCR calls
SCNDLOVF	Second link offered DCR call overflows

FRSTLOFR

Register type
Peg

Description
FRSTLOFR counts tandem DCR calls that the system offers to the first link of a two-link recommended path. This register increases when the system routes a call to a correct DCR tandem route. The subsystem routes the call to the DCR tandem route if the route is or is not available.

Associated registers
TRK_NATTMPT, which counts outgoing calls that the system routes to the trunk group

Extension registers
None

Associated logs
None

FRSTLOVF

Register type
Peg

Description
FRSTLOVF counts tandem DCR calls that overflow the first link of a two-link recommended path. The system routes these calls to the special route list for the correct DCR destination. If there is no special route list or there are no trunks available, the system routes the call to generalized no-circuit treatment (GNCT).

Associated registers
The following registers are associated with FRSTLOVF:

- DCRDEST_RECMDOVF, which counts DCR calls that overflow the first recommended tandem route
- TRK_NOVFLATB, which counts calls that overflow a trunk group. The system reroutes these calls because an idle trunk is not available.
- OVZ2 and SOTS, which provide information on the cause of the GNCT for outgoing trunks or the outgoing side of two-way trunks

Extension registers
None

Associated logs
None

SCNDLOFR

Register type
Peg

Description
SCNDLOFR counts tandem DCR calls that the system offers as the second link of a two-link recommended path.

SCNDLOFR continues to count when DCR deactivates.

SCNDLOFR increases at the routing stage. As a result, the SCNDLOFR can increase. It increases when the user uses CI

command TRAVER (translation and routing verification) with the no-trace (NT) option.

Associated registers
The following registers are associated with SCNDLOFR:

- TRK_NATTMPT, which counts outgoing calls that the system routes to the trunk group
- DCRICTRK_DCRTAND, which counts incoming calls that attempt to use the DCR switch as a tandem office

Extension registers
None

Associated logs
None

SCNDLOVF

Register type
Peg

Description
SCNDLOVF counts tandem DCR calls that overflow the second link of a two-link recommended path. The system routes these calls to generalized no-circuit treatment (GNCT)

SCNDLOVF continues to count when DCR deactivates.

Associated registers
The following registers are associated with SCNDLOVF:

- TRK_NOVFLATB, which counts calls that overflow the trunk group.The system reroutes these calls because an idle trunk is not available.
- OFZ2 and SOTS, which provide information on the cause of GNCT for outgoing trunks or the outgoing side of two-way trunks

Extension registers
None

Associated logs
LINE 138, TRK138

DCRMISC

Description

OM group Dynamically Controlled Routing Miscellaneous (DCRMISC) provides measurements for switches that use the Dynamically Controlled Routing (DCR) feature.

The DCR feature provides tandem routes for toll calls for a toll switch. The DCR provides routes for calls for a toll switch that is one or two links The OM group away from the originating toll switch. A network processor (NP) computes other possible tandem routes, and recommends the route that can succeed.

At equal intervals, each switch with the DCR feature sends the trunk measurements to the NP. The NP recommends specified routes for calls for a DCR toll switch.

The NP recommends the following action:

- the calls continue on the fixed route
- the calls route to a different tandem route
- the system block the calls

All DMS-100 switches with the DCR feature have the DCRMISC.

The following table lists the key and info fields associated with OM group DCRMISC.

Key field	Info field
NETNAME	None

Enter data in four tables: DESTKEY, DESTNODE, DCROPT, and TKTONODE.

Table DESTKEY stores all DCR destinations, like destinations two or more DCR links away from the switch.

Table DESTNODE contains a tuple for every DCR destination that is one or two DCR links away from the switch.

The operating company uses table DCROPT to control the different modes of operation that the DCR package introduces.

Table TKTONODE lists the trunk group common language location identifiers (CLLI). Table TKTONODE lists the CLLI of all incoming and two-way trunks considered to be DCR trunks. For each DCR trunk group, the table lists the CLLI of the office from which the trunk group is incoming.

Related functional groups

All DMS-100 switches with the DCR feature are associated with OM group DCRMISC.

Registers

The following table lists the registers associated with OM group DCRMISC and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DCRMISC

Register name	Measures
BLKECPT	Blocked Dynamically Controlled Routing calls attempting exceptional routes
DCRBDREC	Bad network processor recommendations
DCRBLK	DCR blocked calls
DCRNOREC	No network processor (NP) recommendation
SCNLOVF	Second link overflow
MANSWTCH	Manual switch over
AUTSWTCH	Automatic switch over

BLKECPT

Register type
Peg

Description
BLKECPT counts DCR calls that the system blocks after the calls attempt DCR exceptional routes. The system blocks the calls because trunks are not available. The system can block the calls when DCR exceptional routes datafill is not present.

Associated registers
DCRBLK

Extension registers
None

Associated logs
None

DCRBDREC

Register type
Peg

Description
DCRBDREC counts invalid recommendation packets that the network processor sends to the DMS switch. The Network processor sends the recommendation packets to the DMS switch because of sanity failures or transmission errors. The system ignores the invalid recommendations. The system uses the recommendations from the previous reporting cycle to route calls.

Associated registers
None

Extension registers
None

Associated logs
None

DCRBLK

Register type
Peg

Description
DCRBLK counts DCR calls that the system blocks because of a block recommendation from the network processor. The DCRBLK counts calls that the system blocks in the exceptional route list. The system blocks calls in the exceptional route list because trunks are not available, or because the route list is empty.

Associated registers
DCRDEST_BLKRECMD, which counts DCR calls that the system blocks on the recommendation of the NP

Extension registers
None

Associated logs
None

DCRNOREC

Register type
Peg

Description
DCRNOREC counts reporting cycles when the NP does not make a recommendation. The NP does not make a recommendation because of a loss of communication between the switch and the NP. A failure in the NP causes loss of communication. A failure in the link between the DMS switch and the NP can cause loss of communication.

Associated registers
None

Extension registers
None

Associated logs
None

SCNLOVF

Register type
Peg

Description
SCNLOVF counts tandem DCR calls that overflow the second link of a two-link recommended path. The system routes these calls to generalized no-circuit (GNCT) treatment.

SCNLOVF counts calls when the system deactivates DCR routing.

Associated registers
DCRLINK_SCNLOVF, which counts tandem DCR calls that overflow the second link of a two-link recommended path for each DCR link.

Extension registers
None

Associated logs
LINK138, TRK138

MANSWTCH

Register type
Peg

Description
MANSWTCH measures the number of times that a DCR network switches communication from an active link to a standby link. The DCR network switches communication because of the DCRUTIL CI command SWITCH.

Associated registers
None

Extension registers
None

Associated logs
DCR107

AUTSWTCH

Register type
Peg

Description
AUTSWTCH measures the number of times that a DCR network switches communication from an active link to a standby link. This action occurs for reasons other than the use of the DCRUTIL CI command SWITCH.

Associated registers
None

Extension registers
None

Associated logs
DCR107

DDU

Description

OM group Disk Drive Unit file and maintenance work (DDU) provides information on disk drive units (DDU). A DDU is an external storage device in an I/O equipment frame. Registers count errors and faults that the system detects in DDUs, and record if DDUs are manual or system busy. The system uses data provided by DDU to monitor the performance of DDUs.

The following table lists the key and info fields associated with OM group DDU.

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with OM group DDU:

- DMS-100 Local
- DMS-200 Toll
- DMS-250 Toll/Tandem
- DMS-300 Gateway
- DMS International
- DMS-MTX

Registers

The following table lists the registers associated with OM group DDU and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DDU

Register name	Measures
DDUERROR	DDU errors
DDUFAULT	DDU fault
DDUMBUSY	DDU manual busy usage
DDUSBUSY	DDU system busy usage

DDUERROR

Register type
Peg

Description
DDUERROR counts I/O errors that cause an in-service DDU to become system busy. Register DDUERROR counts:

- temporary errors that cause the DDU to become temporarily system busy
- faults that cause the DDU to remain system busy until an action corrects the fault

Associated registers
DDUFAULT

Extension registers
None

Associated logs
DDU100, DDU101, DDU204, DDU205, IOG101

DDUFAULT

Register type
Peg

Description
DDUFAULT increases if either of the following events occurs:

- the system makes an attempt to return to service a DDU that fails after an error makes the DDU system busy
- the system makes a DDU system busy four times in a single audit cycle and the DDU remains system busy

Associated registers
DDUERROR

Extension registers
None

Associated logs
DDU204, DDU205, DDU208, DDU209, DDU212

DDUMBUSY

Register type
Usage

Scan rate
100 seconds

Description
DDUMBUSY increases each time the system detects a manual busy DDU.

Associated registers
None

Extension registers
None

Associated logs
DDU203

DDUSBUSY

Register type
Usage

Scan rate
100 seconds

Description
DDUSBUSY increases each time the system detects a system busy DDU.

Associated registers
None

Extension registers
None

Associated logs
DDU204

DPTNODE

Description

OM group Dynamic Packet Trunk Node (DPTNODE) measures DPT usage on a Multi-service Gateway (MG) 4000, a Dynamic Packet Trunk (DPT) SPM ATM, or a Gateway Controller (GWC). DPTNODE contains registers that maintain terminal usage and failure counts.

The following table lists the key and info fields associated with OM group DPTNODE.

Key field	Info field
None	DPT_NODE_OM_PM_INFO

The info field appears only if the MULTINET_DISPLAY_ACTIVE parameter in the OFCVAR table is set to Y.

Note 1: For GWC nodes, the info field contains the DPT protocol (BICC or SIP-T) associated with the GWC as data filled in the SERVSINV table.

Note 2: For MG 4000 and DPT SPM nodes, the info field contains the associated bearer network, the DPT protocol (BICC), and the SPM node type (SMG4 or DPT). The bearer network is comprised of the Network ID and Name as data filled in the BEARNETS table and linked to the SPM-based node through the MNNODE table.

Related functional groups

There are no functional groups associated with OM group DPTNODE.

Registers

The following table lists the registers associated with OM group DPTNODE and what they measure.

Attempts to get a DPT terminal is said to be *optimized* when the attempt to get a Terminal ID (TID) occurs on the same device that hosts the other agent in the call. A device can be an MG4K, and DPT SPM or DPT GWC.

Attempts to get a DPT terminal is said to be *non-optimized* when the attempt to get a TID is not constrained to the same device.

For a detailed description of a register, click on the register name.

Registers for OM group DPTNODE

Register name	Measures
DPTGTAT	Get terminal attempts
DPTGTFL	Get terminal fail
DPTGTFLO	Get terminal fail optimized
DPTUSAG	Terminal usage
DPTHWT	Terminal usage high watermark

DPTGTAT

Register type
Peg

Description
DPTGTAT counts the number of requests to get a DPT terminal from a node. The register is pegged for that node:

- for a typical SIPT call, the number of pegs is 1 for each DPT agent, per call
- for a typical BICC call, the number of pegs is from 1 to 3 pegs for each DPT agent, per call

Associated registers
The following registers are associated with DPTGTAT:

- DPTGTFL
- DPTGTFLO

Extension registers
DPTGTAT2

Associated logs
None

DPTGTFL

Register type
Peg

Description
DPTGTFL counts the number of failed attempts to get a *non-optimized* DPT terminal from a DPT node. The attempts can fail when either a terminal is not available from a free pool, or when an error occurs.

Associated registers
The following registers are associated with DPTGTFL:

- DPTGTAT

Extension registers
None

Associated logs
None

DPTGTFLO

Register type
Peg

Description
DPTGTFLO counts the number of failed attempts to get an *optimized* DPT terminal. The attempts can fail when either a terminal is not available from a free pool, or when an error occurs.

Pegs to this register do not signify call failures and do not require corrective action. The failed attempt to get an *optimized* terminal is immediately followed by an attempt to get a *non-optimized* terminal.

Associated registers
The following registers are associated with DPTGTFL:

- DPTGTAT

Extension registers
None

Associated logs
None

DPTUSAG

Register type
Usage

Scan rate
100 seconds

Description
DPTUSAG measures the number of terminals that are call processing busy (CPB) and call processing deloading (CPD). The formula for calculating the usage is as follows:

current_usage = (current_cpb + current_cpd)
usage_om = usage_om + current_usage

To calculate average usage, divide the results by the number of slow samples during a specific transfer period.

Associated registers
None

Extension registers
DPTUSAG2

Associated logs
DPT800, DPT801, DPT802, DPT803

DPTHWT

Register type
Usage

Scan rate
10 seconds

Description
DPHWT registers a terminal usage high watermark count in a transfer period. The high watermark for number of DPT terminals in use is calculated every 10 seconds, as follows:

High watermark = in-service DTP terminals - free DPT terminals

Free DPT terminals represent in-service terminals in the free queue that are eligible for call processing. The register updates if the value from the current calculation exceeds the previous value in the register for the transfer period.

The formula for calculating high watermark is as follows:

```
current_usage = (current_cpb + current_cpd)

 if current_usage > high_water_mark_om

 then high_water_mark_om = current_usage
```

```
else register is not updated
```

Associated registers
None

Extension registers
None

Associated logs
None

DPLOM

Description

OM group Dynamic Packet Line OM (DPLOM) measures the usage of the virtual terminal identifier (VID) resource pool for SIP lines. One VID is required for each appearance of a SIP line in a CS2000 call.

The following table lists the key and info fields associated with OM group DPLOM.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group DPLOM.

Registers

The following table lists the registers associated with OM group DPLOM and what they measure. For a description of a register, click on the register name.

Registers for OM group DPLOM

Register name	Measures
DPLFNVA	Number of VID allocations failed due to no VIDs available
DPLFBAL	Number of VID allocations failed due to balancing
DPLFREB	Number of VID deallocations failed due to rebuilding
DPLRLOS	Number of queue elements with state=lost reclaimed by the lost scan audit
DPLRCAL	Number of queue elements with state= callp reclaimed by the lost scan audit
DPLUSE	VIDs in use
DPLFRE	VIDs available

Registers for OM group DPLOM

Register name	Measures
DPLNOA	Number of allocations
DPLNOD	Number of deallocations

DPLFNVA

Register type
Peg

Description
Number of VID allocations failed due to no VIDs available. It records the number of times that a call failed to allocate a VID from the DPL VID resource because the free list was empty.

Associated registers
None

Extension registers
None

Associated logs
None

DPLFBAL

Register type
Peg

Description
Number of VID allocations failed due to balancing. It records the number of times that a call failed to allocate a VID from the DPL VID resource because the free list was being balanced.

Associated registers
None

Extension registers
None

Associated logs
None

DPLFREB

Register type
Peg

Description
Number of VID deallocations failed due to rebuilding. It records the number of times that a call failed to return a VID to the DPL VID resource because the free list was being rebuilt.

Associated registers
None

Extension registers
None

Associated logs
None

DPLRLOS

Register type
Peg

Description
Number of queue elements with state=lost reclaimed by the lost scan audit. It records the number of VIDs that were recovered and put back on the resource pool free list when a call failed to return a VID to the DPL VID resource pool free list because the free list was being rebuilt.

Associated registers
None

Extension registers
None

Associated logs
None

DPLRCAL

Register type
Peg

Description
Number of queue elements with state=callp reclaimed by the lost scan audit. It records the number of VIDs that were recovered and put back on the resource pool free list when a call failed to return a VID to the DPL VID resource pool free list because the call terminated abnormally.

Associated registers
None

Extension registers
None

Associated logs
None

DPLUSE

Register type
Usage

Scan rate
100s

Description
VIDs in use. It records the number of VIDs allocated from the DPL VID resource pool.

Associated registers
None

Extension registers
DPLUSE2

Associated logs
None

DPLFRE

Register type
Usage

Scan rate
100s

Description
VIDs available. It records the size of the DPL VID resource pool free list.

Associated registers
None

Extension registers
DPLFRE2

Associated logs
None

DPLNOA

Register type
Peg

Description
Number of allocations. It records the number of times that a call successful allocations from the DPL VID resource pool.

Associated registers
None

Extension registers
DPLNOA2

Associated logs
None

DPLNOD

Register type
Peg

Description
Number of deallocations. It records the number of times that a call successfully returned a VID to the DPL VID resource pool.

Associated registers
None

Extension registers
DPLNOD2

Associated logs
None

DPTOFC

Description

OM group Dynamic Packet Trunk Office (DPTOFC) measures DPT usage on the Multi-service Gateway (MG) 4000 and the Dynamic Packet Trunk (DPT) SPM ATM for an entire office.

The following table lists the key and info fields associated with OM group DPTOFC.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group DPTOFC.

Registers

The following table lists the registers associated with OM group DPTOFC and what they measure.

Attempts to get a DPT terminal is said to be *optimized* when the attempt to get a Terminal ID (TID) occurs on the same device that hosts the other agent in the call. A device can be an MG4K, a DPT SPM, or DPT GWC.

Attempts to get a DPT terminal is said to be *non-optimized* when the attempt to get a TID is not constrained to the same device.

For a detailed description of a register, click on the register name.

Registers for OM group DPTOFC

Register name	Measures
DPGTAT	Number of attempts to get DPT terminal
DPGTFL	Number of attempts to get a DPT terminal that failed (non-optimized)
DPUSAG	Terminal usage
DPGTFLO	Number of attempts to get a DPT terminal that failed (optimized)

Registers for OM group DPTOFC

Register name	Measures
DPHWT	Terminal usage high watermark
DPDPL	Number of attempts to get DPT terminal that failed due to port depletion

DPGTAT

Register type
Peg

Description
DPGTAT counts the number of requests to get a terminal from any DPT node in an office. The register is pegged for that node:

- for a typical SIPT call, the number of pegs is 1 for each DPT agent, per call
- for a typical BICC call, the number of pegs is from 1 to 3 pegs for each DPT agent, per call

Associated registers
The following registers are associated with DPGTAT:

- DPGTFL
- DPGTFLO

Extension registers
DPGTAT2 increments when DPGTAT reaches 65,535

Associated logs
None

DPGTFL

Register type
Peg

Description
DPGTFL counts the number of failed attempts to get a *non-optimized* terminal from any DPT node in an office. The attempts can fail either when a terminal is not available from the free pool, or when an error occurs.

Associated registers
The following registers are associated with DPGTFL:

- DPGTAT (pegged each time DPGTFL is pegged)

Extension registers
DPGTFL2 increments when DPGTFL2 reaches 65,535

Associated logs
None

DPUSAG

Register type
Usage

Scan type
100 seconds

Description
DPUSAGE measures the number of terminals that are call processing busy (CPB) and call processing deloading (CPD). This is an accumulator register and the register number is added to itself. The formula for calculating the usage is as follows:

current_usage = (current_cpb + current_cpd)
usage_om = usage_om + current_usage

To calculate average usage, divide the results by the number of slow samples during a specific transfer period.

Associated registers
None

Extension registers
DPUSAG2 increments when DPUSAG reaches 65,535

Associated logs
DPT800, DPT801, DPT802, DPT803

DPGTFLO

Register type
Peg

Description
DPGTFLO counts the number of failed attempts to get an *optimized* DPT terminal. The attempts can fail when either a terminal is not available from a free pool or when an error occurs.

Pegs to this register do not signify call failures and do not require corrective action. The failed attempt to get an *optimized* terminal is immediately followed by an attempt to get a *non-optimized* terminal.

Associated registers
The following registers are associated with DPGTFLO:

- DPGTAT
- DPGTFL

Extension registers
DPGTFLO2 increments when DPGTFLO reaches 65,535

Associated logs
None

DPHWT

Register type
Usage

Scan rate
10 seconds

Description
DPHWT registers a terminal usage high watermark count in a transfer period. The high watermark for number of DPT terminals in use is calculated every 10 seconds, as follows:

High watermark = in-service DTP terminals - free DPT terminals

Free DPT terminals represent in-service terminals in the free queue that are eligible for call processing. DPHWT updates if the value from the current calculation exceeds the previous value kept in the register for the transfer period.

The formula for calculating high watermark is as follows:

```
current_usage = (current_cpb + current_cpd)

 if current_usage > high_water_mark_om

 then high_water_mark_om = current_usage

 else register is not updated
```

Associated registers
None

Extension registers
DPHWT2 increments when DPHWT reaches 65,535

Associated logs
None

DPDPL

Register type
Peg

Description
DPDPL counts the number of failed attempts to get a DPT terminal due to port depletion.

This is an incremental register. The register is pegged every time an attempt to get a DPT terminal fails due to port depletion within a given transfer period.

Associated registers
None

Extension registers
DPDPL2 increments when DPDPL reaches 65,535

Associated logs
None

DPTOFCP

Description

OM group Dynamic Packet Trunk Office Protocol (DPTOFCP) measures DPT protocol (BICC and SIP-T) performance for an entire office.

The following table lists the key and info fields associated with the DPTOFCP OM group.

Key field	Info field
DPT_PROTOCOL_TYPE	DPTOFCP_SIG_INFO

Related functional groups

Dynamic Packet Trunks functional groups are associated with OM group DPTOFCP.

Registers

The following table lists the registers associated with OM group DPTOFCP and what they measure. For a detailed description of a register, click on the register name.

Attempts to get a DPT terminal is said to be optimized when the attempt to get a Terminal ID (TID) occurs on the same device that hosts the other agent in the call. A device can be an MG4K, a DPT SPM, or DPT GWC.

Attempts to get a DPT terminal is said to be non-optimized when the attempt to get a TID is not constrained to the same device.

Registers for OM group DPTOFCP

Register name	Measures
DPGTATT	Number of attempts to get DPT terminal
DPGETFL	Number of attempts to get a DPT terminal that failed (non-optimized)
DPUSAGE	DPT terminal usage
DPOTFLO	Number of attempts to get a DPT terminal that failed (optimized)

Registers for OM group DPTOFCP

Register name	Measures
DPHWTR	DPT terminal usage high watermark
DPRTDPL	Number of attempts to get DPT terminal that failed due to port depletion

DPGTATT

Register type
Peg

Description
DPGTATT counts the number of attempts to get a DPT terminal on the associated protocol.

The register is pegged for that node:

- for a typical SIPT call, the number of pegs is 1 for each DPT agent, per call
- for a typical BICC call, the number of pegs is from 1 to 3 pegs for each DPT agent, per call

Associated registers
None

Extension registers
DPTGTATT2

Associated logs
None

DPGETFL

Register type
Peg

Description
DPGETFL counts the number of failed attempts to get a non-optimized terminal from any DPT node in an office. The attempts can fail either when a terminal is not available from the free pool, or when an error occurs.

Associated registers
None

Extension registers
DPGETFL2

Associated logs
None

DPOTFLO

Register type
Peg

Description
DPOTFLO counts the number of failed attempts to get an optimized DPT terminal on an associated protocol. Pegs to DPOTFLO are benign and do not require corrective action.

Associated registers
None

Extension registers
DPOTFLO2

Associated logs
None

DPUSAGE

Register type
Usage

Scan type
100 seconds

Description
DPUSAGE measures the number of terminals that are call processing busy (CPB) and call processing deloading (CPD). This is an accumulator register and the register number is added to itself. The formula for calculating the usage is as follows:

current_usage = (current_cpb + current_cpd)
usage_om = usage_om + current_usage

To calculate average usage, divide the results by the number of slow samples during a specific transfer period.

Associated registers
None

Extension registers
DPUSAGE2

Associated logs
None

DPHWTR

Register type
Usage

Scan rate
10 seconds

Description
DPHWTR registers a terminal usage high watermark count in a transfer period. The high watermark for number of DPT terminals in use is calculated every 10 seconds, as follows:

High watermark = in-service DTP terminals - free DPT terminals

Free DPT terminals represent in-service terminals in the free queue that are eligible for call processing. DPHWT updates if the value from the current calculation exceeds the previous value kept in the register for the transfer period.

The formula for calculating high watermark is as follows:

```
current_usage = (current_cpb + current_cpd)
if current_usage > high_water_mark_om
then high_water_mark_om = current_usage
else register is not updated
```

Associated registers
None

Extension registers
DPHWTR2

Associated logs
None

DPRTDPL

Register type
Peg

Description
DPRTDPL counts the number of failed attempts to get a DPT terminal due to port depletion (exceeding the DPT_MAX_PORT office parameter value).

This is an incremental register. The register is pegged every time an attempt to get a DPT terminal fails due to port depletion within a given transfer period.

Associated registers
None

Extension registers
DPRTDPL2

Associated logs
None

DRCW

Description

OM group Distinctive Ringing/Call Waiting (DRCW) monitors use of the Distinctive Ringing/Call Waiting (DR/CW) feature. You can obtain this feature alone or as part of the common access group of features. DRCW registers track the following activities:

- common access counts, which include DR/CW access attempts, successful activations and deactivations, and denials.
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain registers when subscribers do one of the following from an off-board application:
  - query the status and/or programmed information of corresponding subscribed-to services
  - generate a request to activate, deactivate or change the services

  For more information about the Off-board Service Control feature, refer to *"Advanced Intelligent Network Essentials Service Implementation Guide"*, 297-5161-021, and the *"Advanced Intelligent Network Essentials Service Enablers"*, 297-5161-022.

  The Off-board Service Control feature applies only to DMS.
- attempts to invoke a DR/CW screen list editing (SLE) session
- calls that the system denies access to DR/CW SLE because of system failure or not enough resources
- calls that the system denies access to DR/CW SLE because the DR/CW feature is not assigned or is not available
- activation of the DR/CW feature
- deactivation of the DR/CW feature
- calls that the system screen because the DR/CW feature is active
- attempts to provide distinctive call waiting tone
- calls for which the system applies distinctive ringing
- attempts to provide DR/CW tone that fail because not enough system resources are present
- calls that the DR/CW screening list does not screen because the incoming directory number is not available
- calls that the DR/CW screening list does not screen because the screening list is not available

The DR/CW feature contains one usage register that records if a line uses DR/CW SLE.

The following table lists the key and info fields associated with OM group DRCW.

Key field	Info field
None	None

Related functional groups

The MDC operating group is associated with OM group DRCW.

Registers

The following table lists the registers associated with OM group DRCW and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DRCW (Sheet 1 of 2)

Register name	Measures
DRCWACT	DRCW activation
DRCWAUNV	DRCW activation universal
DRCWDACT	DRCW deactivation
DRCWDENY	DRCW universal access denials
DRCWDUNV	DRCW deactivation universal
DRCWEATT	DRCW editing attempts
DRCWEDEN	DRCW editing denials
DRCWEOVF	DRCW editing overflow
DRCWEUSG	DRCW editing usage
DRCWRING	DRCW ring provided
DRCWSAT	DRCW screening attempt
DRCWSBLK	DRCW screening blocked
DRCWSDEN	DRCW screening denials

Registers for OM group DRCW (Sheet 2 of 2)

Register name	Measures
DRCWTATT	DRCW tone attempt
DRCWTOVF	DRCW tone overflow
DRCWUNIV	DRCW universal access attempts

DRCWACT

Register type
Peg

Description
DRCWACT counts activations of the Distinctive Ringing/Call Waiting (DR/CW) feature.

For DMS only: The register is pegged when a subscriber activates the DRCW service. Similar to the operations performed by service access code controlled activation, DRCWACT is pegged for each occurrence of an off-board service update activation request.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWAUNV

Register type
Peg

Description
DRCWAUNV counts the number of times a common user activates the Distinctive Ringing/Call Waiting (DR/CW) feature.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWDACT

Register type
Peg

Description
DRCWDACT counts releases of the Distinctive Ringing/CallWaiting (DR/CW) feature.

For DMS only: The register is pegged when a subscriber deactivates the DRCW service. Similar to the operations performed by service access code controlled activation, DRCWDACT is pegged for each occurrence of an off-board service update deactivation request.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWDENY

Register type
Peg

Description
DRCWDENY counts the number of times the system denies the Distinctive Ringing/Call Waiting (DR/CW) to a common user. The system denies the feature DR/CW to a common user because the DRCWDENY option is in effect.

For DMS only: DRCWDENY is pegged each time a subscriber attempts to update DRCW programmed data using a edit session, and the attempt is denied because the DENY option is present. The register is pegged when the following is true for a given DRCW off-board service update request:

- The DOR option is present on the DRCW subscriber line.
- DRCW is enabled office wide, and the DENY SCA option is present on the subscriber line.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWDUNV

Register type
Peg

Description
DRTCWDUNV counts the number of times a common user deactivates the Distinctive Ringing/Call Waiting (DR/CW) feature.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWEATT

Register type
Peg

Description
DRCWEATT counts attempts to invoke a distinctive ringing/call waiting (DR/CW) screen list editing (SLE) session.

For DMS only: The register is pegged when a subscriber uses an edit session to update DRCW programmed data. Similar to the operations performed in a service access code controlled edit session, DRCWEATT is pegged for off-board service update requests to do the one of the following activities:

- add or delete a DN to or from a subscriber DRCW list
- delete all DNs in a subscriber DRCW list
- delete all anonymous or private entries in a subscriber DRCW list

Associated registers
None

Extension registers
None

Associated logs
None

DRCWEDEN

Register type
Peg

Description
DRCWEDEN counts calls that the system denies access to distinctive ringing/call waiting (DR/CW) screen list editing (SLE). The system denies access because the DR/CW feature is not assigned or is not available. When the feature is not assigned, or is not active in the office, the system routes the call to the feature not allowed (FNAL) treatment.

For DMS only: DRCWEDEN is pegged each time a subscriber attempts to update DRCW programmed data using a edit session, and the attempt is denied. The register is pegged when the following is true for a given DRCW off-board service update request:

- SLE is not enabled in table DUSTSTN.
- SCF is not enabled in table RESOFC.

Associated registers
None

Extension registers
None

Associated logs
LINE138

DRCWEOVF

Register type
Peg

Description
DRCWEOVF counts calls that the system denies access to distinctive ringing/call waiting (DR/CW) screen list editing (SLE). The system denies access because of system failure or not enough resources.

As a result of not enough hardware resources, the system routes the call to the no service circuit (NOSC) treatment. As a result of not enough software resources, the system routes the call to the no software resource (NOSR) treatment.

Associated registers
None

Extension registers
None

Associated logs
LINE138

DRCWEUSG

Register type
Usage

Scan rate
10 seconds

Description
DRCWEUSG records if a line uses distinctive ringing/call waiting (DR/CW) screen list editing (SLE).

Associated registers
None

Extension registers
None

Associated logs
None

DRCWRING

Register type
Peg

Description
DRCWRING counts calls for which the system applies distinctive ringing.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWSAT

Register type
Peg

Description
DRCWSAT counts calls that the system screens because the Distinctive Ringing/Call Waiting (DR/CW) feature is active.

Associated registers
None

Extension registers
DRCWSAT2

Associated logs
None

DRCWSBLK

Register type
Peg

Description
DRCWSBLK counts calls that the distinctive ringing/call waiting (DR/CW) screening list does not screen. The DR/CW screening list does not screen the calls because the screening list is not available.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWSDEN

Register type
Peg

Description
DRCWSDEN counts calls that the distinctive ringing/call waiting (DR/CW) screening list does not screen. The DR/CW screening list does not screen the calls because the incoming directory number is not available.

A multiparty line that calls a line with the DRCW feature increases the register because a multiparty line does not have automatic number identification (ANI).

Associated registers
None

Extension registers
None

Associated logs
None

DRCWTATT

Register type
Peg

Description
DRCWTATT counts attempts to provide distinctive call waiting tone.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWTOVF

Register type
Peg

Description
DRCWTOVF counts attempts to provide distinctive ringing/call waiting (DR/CW) tone that fail. The attempts fail because not enough system resources are present. The system routes the call to busy (BUSY) treatment.

Associated registers
None

Extension registers
None

Associated logs
None

DRCWUNIV

Register type
Peg

Description
DRCWUNIV counts attempts by a common user to access the Distinctive Ringing/Call Waiting (DR/CW) feature.

Associated registers
None

Extension registers
None

Associated logs
None

DS1CARR

Description

OM group DS-1 Digital Carrier Maintenance Summary (DS1CARR) provides information about maintenance thresholds and out-of-service (OOS) thresholds for digital trunks on digital peripheral modules (PM). When the SD-1 exceeds OOS thresholds, the system removes the DS-1 from service until the DS-1 is manually returned to service.

Trunks on the DS-1 carrier are set to the carrier fail state. You can set each DS-1 carrier to NOT TO BE REMOVED or leave the DS-1 carrier alone. You perform this procedure when the DS-1 carrier reaches the OOS threshold. If you set the DS-1 carrier to NOT TO BE REMOVED, the system only generates a log. The CARRIER level of the MAP terminal displays this information on the DS-1 carrier.

For remote line module (RLM) or line concentrating module (LCM) link errors, the OM group DS1CARR provides monitoring for the:

- central control (CC) or host end
- remote end of a DS-1 carrier, except for the following registers:
  - DS1SBU
  - DS1MBU
  - DS1PBU
  - DS1CBU

The system reports one set of registers for each carrier port of each digital PM.

If a carrier system is busy, all trunks that the carrier system serves change to the carrier fail state. Register TRK_SBU records system busy use for each trunk group.

Maintenance thresholds are 1 bit in 107 for bit error rate, 17 accumulated losses of frame, or 4 accumulated slips.

The OOS thresholds are 1 bit in 103 for bit error rate, 511 accumulated losses of frame, or 255 accumulated slips. A carrier that becomes busy because of bit error must wait to return to service. The carrier cannot return to service until the measured long-term rate of the system drops below 1 bit in 105.

The following table lists the key and info fields associated with OM group DS1CARR.

Key field	Info field
None	The DS1OMINF information field identifies a terminal on a given digital PM.

The information field contains the following:

- site of the PM
- PM type
- external PM sequence number
- DS-1 carrier number (0 to 19) in the PM
- carrier direction (C or P). The carrier direction indicates if the PM port is on the central side (C-side) or peripheral side (P-side) of the carrier.

Related functional groups

The following functional groups are associated with OM group DS1CARR.

- RLM
- LCM

Registers

The following table lists the registers associated with OM group DS1CARR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DS1CARR (Sheet 1 of 2)

Register name	Measures
DS1AIS	DS-1 alarm indication signals
DS1BER	DS-1 bit error rate
DS1CBU	C-side busy usage
DS1ECF	DS-1 echo canceller failure
DS1ES	DS-1 error seconds

Registers for OM group DS1CARR (Sheet 2 of 2)

Register name	Measures
DS1LCGA	Local carrier group alarm
DS1LOF	Loss of frame
DS1MBU	Manual busy usage
DS1PBU	Peripheral side (P-side) busy usage
DS1RCGA	Remote carrier group alarm
DS1SBU	System busy usage
DS1SES	DS-1 severe error seconds
DS1SLP	Frame slip
DS1UAS	DS-1 unavailable seconds

DS1AIS

Register type
Peg

Description
DS1AIS counts messages the system receives from the PM and indicates that the PM receives an alarm indication signal.

Associated registers
None

Extension registers
None

Associated logs
NOne

DS1BER

Register type
Peg

Description
DS1BER counts messages that the system receives from the PM. The messages indicate that the bit error rate exceeds maintenance or OOS thresholds.

Associated registers
Information in DS1BPV before BCS24 is now in register DS1BER.

Extension registers
None

Associated logs
None

DS1CBU

Register type
Usage

Scan rate
100 seconds

Description
DS1CBU records if the DS-1 carrier is C-side busy. The DS-1 carrier is C-side busy because the C-side PM of the carrier is OOS.

Associated registers
None

Extension registers
None

Associated logs
PM107

DS1ECF

Register type
Peg

Description
DS1ECF counts the number of echo canceller failures in the DS-1 carrier during a 10-minute audit cycle.

Associated registers
None

Extension registers
None

Associated logs
TRK109

DS1ES

Register type
Peg

Description
DS1ES counts DS-1 error seconds during XMS-based peripheral module (XPM) audits. Table CARRMTC identifies error second thresholds.

Associated registers
None

Extension registers
None

Associated logs
None

DS1LCGA

Register type
Peg

Description
DS1LCGA increases when the system receives a local carrier group alarm message from the PM. The system reports a local carrier group alarm when the system loses framing on incoming data for 2.5 seconds. The alarm clears when the system regains framing for 10 seconds. While the alarm is active, the CC maintains the carrier system as system busy.

Associated registers
None

Extension registers
None

Associated logs
PM109

DS1LOF

Register type
Peg

Description
DS1LOF counts occurrences of frame loss on the incoming side of the associated digital carrier. The system obtains counts of frame loss

when an audit runs at midnight. The system schedules audits to run at 10-minute intervals, at a lower priority than operational measurement transfers. The audit reports frame losses during any given period. The number of frame losses that the audit reports can be high or low by 10-minute increments.

The CARRIER display at a MAP terminal shows the number of frame losses accumulated from midnight. If the system returned to service after midnight, the CARRIER display shows the number of frame losses accumulated from the return to service. The system updates the carrier display every 6.5 seconds.

Associated registers
None

Extension registers
None

Associated logs
PM110

DS1MBU

Register type
Usage

Scan rate
100 seconds

Description
DS1MBU records if a DS-1 carrier is manual busy.

Associated registers
None

Extension registers
None

Associated logs
PM105. TRK182

DS1PBU

Register type
Usage

Scan rate
100 s

Description
DS1PBU records if a DS-1 carrier is P-side busy. A carrier is P-side busy when the carrier remote (P-side) PM is OOS.

Associated registers
None

Extension registers
None

Associated logs
PM183

DS1RCGA

Register type
Peg

Description
DS1RCGA counts remote carrier group alarm messages that the system receives from the PM. The system reports a remote DS-1 carrier group alarm when DIGIT TWO is zero for all incoming words for 450 ms. The alarm clears when the system removes the far-end DIGIT TWO forcing signal for 75 ms. When the alarm is active, the CC keeps the carrier system busy.

Associated registers
None

Extension registers
None

Associated logs
PM109, TRK109

DS1SBU

Register type
Usage

Scan rate
100 s

Description
DS1SBU records if a DS-1 carrier is system busy when:

- a removal from service occurs at the CARRIER level at a MAP. The DS-1 carrier exceeds the bipolar violation, accumulated frame loss, accumulated slip count, or OOS threshold.
- the carrier group alarm is active
- you remove a trunk card before you manually busy the carrier system
- the supporting digital PM is busy
- the system loses a carrier serving an RLM high data link controller that handles signaling traffic to and from the RLM

A carrier system becomes busy when the carrier reaches an OOS threshold. A carrier system remains OOS until you manually return the carrier to service.

Associated registers
None

Extension registers
None

Associated logs
PM109, TRK109

DS1SES

Register type
Peg

Description
DS1SES counts DS-1 severe error seconds during XPM audits. Table CARRMTC identifies severe error second thresholds.

Associated registers
None

Extension registers
None

Associated logs
None

DS1SLP

Register type
Peg

Description
DS1SLP counts occurrences of frame slip on an associated digital carrier. Flame slip occurs as a result of overrun or underrun of the incoming bit stream.

The system obtains counts of frame loss when an audit runs at midnight. The system schedules audits to run at 10-minute intervals, at a lower priority than operational measurement transfers. The audit reports frame losses during any given period. The number of frame losses that the audit reports can be high or low by 10-minute increments.

The CARRIER display at a MAP terminal shows the number of frame losses accumulated from midnight. If the system returned to service after midnight, the CARRIER display shows the number of frame losses accumulated from the return to service. The system updates the carrier display every 6.5 seconds.

Associated registers
None

Extension registers
None

Associated logs
PM112

DS1UAS

Register type
Peg

Description
DS1UAS counts DS-1 unavailable seconds during XPM audits. The unavailable seconds is the duration that the DS-1 is not available for use.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWID

Description

OM group Deluxe Spontaneous Call Waiting Identification (DSCWID) provides statistics on the use of distribution options that DSCWID subscribers select to treat an incoming call. A DSCWID subscriber receives call-waiting party identification and uses SOFTKEY options to select a treatment for the waiting call.

The operating company defines the soft-key labels with a script. The system downloads the script to customer premises equipment (CPE) that complies with Analog Digital Services Interface (ADSI). Different soft-key labels can appear. The soft-key labels that appear depend on the script in the CPE. The register names in this OM group do not always match the soft-key labels.

The following table lists the key and info fields associated with OM group DSCWID.

Key field	Info field
None	None

Related functional groups

The RES Display Functionality and Privacy functional group is associated with the OM group DSCWID.

Registers

The following table lists the registers associated with OM group DSCWID and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DSCWID (Sheet 1 of 2)

Register name	Measures
DSCWDANN	Deluxe Spontaneous Call Waiting Identification
DSCWDANS	Deluxe Spontaneous Call Waiting Identification Answer
DSCWDCNF	Deluxe Spontaneous Call Waiting conference
DSCWDDRP	Deluxe Spontaneous Call Waiting Identification drop

Registers for OM group DSCWID (Sheet 2 of 2)

Register name	Measures
DSCWDDPF	Deluxe Spontaneous Call Waiting Identification Drop First
DSCWDDPL	Deluxe Spontaneous Call Waiting Identification Drop Last
DSCWDDTM	Deluxe Spontaneous Call Waiting Identification Default Treatment
DSCWDHLD	Deluxe Spontaneous Call Waiting Identification Hold
DSCWDFWD	Deluxe Spontaneous Call Waiting Identification Forward
DSCWDRER	Deluxe Spontaneous Call Waiting Identification RERING
DSCWDRTN	Deluxe Spontaneous Call Waiting Identification return
DSCWDTIM	Deluxe Spontaneous Call Waiting Identification time

DSCWDANN

Register type
Peg

Description
DSCWDANN increases when a DSCWID subscriber selects the BUSY announcement option on the soft-key display.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDANS

Register type
Peg

Description
DSCWDANS increases when a DSCWID subscriber selects the ANSWER option on the soft-key display to answer a waiting call. The subscriber places the active call on hold.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDCNF

Register type
Peg

Description
DSCWDCNF increases when a DSCWID subscriber selects the CONF option on the soft-key display. The CONF option is only visible when a call is waiting or on hold.

Note: Call conferencing can occur from the alerted state before the subscriber answers the waiting caller. Register DSCWDCNF increases and registers DSCWDANS and DSCWDCNF do not increase. This condition occurs when the subscriber answers the waiting party as a latent function of call conferencing.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDDRP

Register type
Peg

Description
DSCWDDRP increases when a DSCWID subscriber selects the DROP option on the soft-key display. The DROP option is only visible when a call is waiting or on hold. The DROP option disconnects the active party and immediately connects the subscriber to the waiting party. When the DROP option connects the subscriber to the waiting party, the DSCWID session ends. The DSCWID session ends because the subscriber only received one call.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDDPF

Register type
Peg

Description
DSCWDDPF increases when a DSCWID subscriber selects the DROPFRST option on the soft-key display. The DROPFRST option is only visible after the subscriber selects the CONFERENCE option. This selection allows the DSCWID subscriber to disconnect the first party. The subscriber returns to a steady two-party state.

Associated registers
DSCWDCONF

Extension registers
None

Associated logs
None

DSCWDDPL

Register type
Peg

Description
DSCWDDPL increases when a DSCWID subscriber selects the DROPLAST option on the soft-key display. The DROPLAST option is only visible after the subscriber selects the CONFERENCE option. This

selection allows the DSCWID subscriber to disconnect the second party. The subscriber returns to a steady two-party state.

Associated registers
DSCWDCONF

Extension registers
None

Associated logs
None

DSCWDDTM

Register type
Peg

Description
DSCWDDTM increases when the DMS-100 applies the forward or announcement default treatment. Register DSCWDDTM does not increase if the default treatment rings.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDHLD

Register type
Peg

Description
DSCWDHLD increases when a DSCWID subscriber selects the HOLD option on the soft-key display. This selection provides an announcement to the waiting party before the system places the waiting party on hold. The subscriber and the active party remain connected.

Note: The HOLD announcements are not always entered in field HOLDANNC of table RESOFC. If a HOLD announcement is not present, DSCWID HOLD attempts do not interrupt the audible ring of the waiting party. Register DSCWDHLD does not increase because HOLD does not occur.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDFWD

Register type
Peg

Description
DSCWDFWD increases when a DSCWID subscriber selects the FWD option on the soft-key display. A DSCWID subscriber selects the FWD option to forward the waiting call to another destination. The subscriber and the active party remain connected. The subscriber must have the Call Forwarding Don't Answer (CFD/CFDA) feature with a valid destination specified. If the subscriber does not have this feature, the FWD condition does not appear on the soft-keys.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDRER

Register type
Peg

Description
DSCWDRER increases when the system rings a DSDWIK subscriber again. The system rings the subscriber again when the subscriber hung up without answering the waiting or held party.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDRTN

Register type
Peg

Description
DSCWDRTN increases when a DSCWID subscriber selects the RETURN option on the soft-key display. The RETURN option is only visible after the subscriber selects the HOLD or the ANSWER option. The RETURN option allows the DSCWID subscriber to toggle between the waiting party and the active party.

Associated registers
None

Extension registers
None

Associated logs
None

DSCWDTIM

Register type
Peg

Description
DSCWDTIM increases when the system sends a call setup message that does not contain calling information delivery (CID). The call setup message contains date and time data only.

Associated registers
None

Extension registers
None

Associated logs
None

DSINWTS

Description

OM group Direct Signaling Inward Area Telecommunications Service (DSINWTS) counts activities for the common channel interoffice signaling (CCIS) inward area telecommunications service (INWATS) originating screen office (OSO) signaling application.

The system sends inquiries for the OM group INWATS to the INWATS databases in the CCIS network. For each request, the system allocates an idle call register from a queue of 64 auxiliary call registers. If CCIS blocking does not occur, the system transmits an INWATS inquiry message. The system stores the call ID, terminal ID, and mailbox ID in the register.

The data base can contain the answer to the inquiry. If this condition occurs, the system dispatches, decodes and formats the reply into a high-level message. The call process requires this reply. The system sends the high-level message to the call process according to information stored in the auxiliary call register. The auxiliary call register is not in operation.

The following table lists the key and info fields associated with OM group DSINWTS.

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with the OM group DSINWTS:

- CCIS
- INWATS

Registers

The following table lists the registers associated with OM group DSINWTS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DSINWTS

Register name	Measures
ABANDONS	Abandons
BUSYLINE	Busy line
DBOVLD	Data base overload
MISCERR	Miscellaneous errors
MTPBLK	Message transfer part block
NOAUXREG	No auxiliary register
NONSBNPA	Nonsubscribed numbering plan area
NWMBLK	Network management blocked
QUERIES	Queries
SUCREPLY	Successful reply
VCNTLINE	Vacant line
VCNTNXX	Vacant NXX

ABANDONS

Register type
Peg

Description
ABANDONS counts INWATS calls that the system abandons before the events that follow occur:

- reception of a reply message from the INWATS data base
- reception of a CCIS failure message
- a query timeout. The maximum timeout time is 2 seconds.

Associated registers
None

Validation formula
Successful INWATS queries to the database = Queries - (DSINWATS_ABANDONS + DSINWATS_VCNTLINE + DSINWATS_NONSBNPA + DSINWATS_BUSYLINE + DSINWATS_ DBOVLD + DSINWATS_ MISCERR + DSINWATS_VCNTNXX)

Extension registers
None

Associated logs
None

BUSYLINE

Register type
Peg

Description
BUSYLINE counts INWATS queries at the data base that fail because all the lines are busy.

Associated registers
Validation formula
Successful INWATS queries to the database = Queries - (DSINWATS_ABANDONS + DSINWATS_VCNTLINE + DSINWATS_NONSBNPA + DSINWATS_BUSYLINE + DSINWATS_ DBOVLD + DSINWATS_ MISCERR + DSINWATS_VCNTNXX)

Extension registers
None

Associated logs
None

DBOVLD

Register type
Peg

Description
DBOVLD counts INWATS queries at the data base that fail because the originating screen office (OSO) is overloaded.

Associated registers
None

Validation formula
Successful INWATS queries to the database = Queries - (DSINWATS_ABANDONS + DSINWATS_VCNTLINE + DSINWATS_NONSBNPA + DSINWATS_BUSYLINE + DSINWATS_ DBOVLD + DSINWATS_ MISCERR + DSINWATS_VCNTNXX)

Extension registers
None

Associated logs
None

MISCERR

Register type
Peg

Description
MISCERR counts INWATS queries at the data base that fail because of miscellaneous errors.

Associated registers
None

Validation formula
Successful INWATS queries to the database = Queries - (DSINWATS_ABANDONS + DSINWATS_VCNTLINE + DSINWATS_NONSBNPA + DSINWATS_BUSYLINE + DSINWATS_ DBOVLD + DSINWATS_ MISCERR + DSINWATS_VCNTNXX)

Extension registers
None

Associated logs
None

MTPBLK

Register type
Peg

Description
MTPBLK counts INWATS calls that fail because of CCIS DS message transfer part blocking.

These calls include temporary code control blocks that are in effect because of either of the following conditions:

- reception of CCIS failure reply messages
- reception of CCIS processor signaling congestion messages
- other CCIS network failures

Associated registers
DSMTP_NTWKOVLD, DSMTP_NTWKBLK

Extension registers
None

Associated logs
None

NOAUXREG

Register type
Peg

Description
NOAUXREG counts INWATS calls that the system abandons an auxiliary call register is not available. For each INWATS application, the system allocates 64 auxiliary call registers.

Associated registers
None

Extension registers
None

Associated logs
None

NONSBNPA

Register type
Peg

Description
NONSBNPA counts INWATS requests that fail because the NPA from which the call originates does not have subscribers.

Associated registers
None

Extension registers
None

Associated logs
None

NWMBLK

Register type
Peg

Description
NWMBLK counts INWATS calls that fail because the system applies network management call gapping code controls to the calls.

Associated registers
None

Extension registers
None

Associated logs
NWM113

QUERIES

Register type
Peg

Description
QUERIES counts INWATS queries sent to the originating screen office (OSO) data base.

Associated registers
None

Extension registers
None

Associated logs
None

SUCREPLY

Register type
Peg

Description
SUCREPLY counts successful INWATS replies.

Associated registers
None

Extension registers
None

Associated logs
None

VCNTLINE

Register type
Peg

Description
VCNTLINE counts INWATS queries at the data base that fail because of an empty line number.

Associated registers
None

Extension registers
None

Associated logs
None

VCNTNXX

Register type
Peg

Description
VCNTNXX counts INWATS queries at the data base that fail because of an empty NXX code.

Associated registers
None

Extension registers
None

Associated logs
None

DSPRMAN

Description

OM group Digital Signal Processor (DSP) Resource Module (RM) Resource Management (RMAN) measures resource and usage for the following events on the Spectrum Peripheral Module (SPM) in the trunking application:

- continuity test (COT)
- dual-tone multi frequency (DTMF)
- tone synthesizer (TONESYN)

DSPRMAN contains registers that count the following events for COT, DTMF, TONESYN, and MF:

- available resource low watermark threshold violations
- resources lost, denied, or utilized
- the highest number of allocated resources

The system generates a report for each SPM node in a DMS-250 switch. Resource pools are provisioned and configured for each RM, but the reports are generated for the node-level pools rather than for the RM-level pools.

Resources can be lost if an attempt is made to spare a failed RM when no spare RM exists. Non-restorable resources (COT, DTMF, TONESYN) are lost during uncontrolled sparing. During controlled sparing, in-use non-restorable resources are released: call processing gracefully relinquishes the resources.

A non-restorable resource (such as DTMF, COT, and TONESYN), if spared, cannot be restored to call processing and is lost. A resource is added to the resource pools when the RM on which it resides comes into service. If it is spared, a restorable resource (such as ECAN and DTMF when they are in FTR mode) can be restored to call processing in its original state.

Controlled (or, *unforced*) *sparing* occurs when a command to deload an RM is entered at the MAP terminal. Non-restorable resources on the RM are deloaded before the RMs are spared.

Uncontrolled sparing occurs either when the RM device maintenance detects a hardware fault, or when sparing is forced at the MAP terminal. Non-restorable resources on the RM are deloaded after the RM hardware is spared.

Deloading a resource means waiting for call processing to release resources before taking a sparing action. To deload an RM means to allow resources that are in use to be released during normal call processing. Deloading occurs only for controlled sparing.

The Spectrum OM Transport System (SOTS) carries DSPRMAN data from the SPM to the computing module (CM). SOTS uses the distributed data manager (DDM) of the DMS switch to transport the data.

The interval for OM collection periods can be changed by using office parameters. For example, the collection/transfer period can be changed to five minutes by setting parameter OMHISTORY in table OFCOPT to Y. The value Y disables parameter OMXFER in table OFCENG.

When the collection period is 30 minutes, data collection occurs every 15 minutes. The one 30-minute collection reflects the combined data from each 15-minute transfer.

The OM base software on the CM receives the data for the active registers one minute before the end of the collection period. At the end of the collection period, active registers become holding registers and the active registers are cleared.

To view the data on the CM, use the OMSHOW command. The active registers display all zeros except during the last minute of the collection period. Therefore, use the OMSHOW command to display the *holding* registers to view the data.

To view the real-time data on an SPM, use the CM tool **remlogin** to log in to the SPM. Change to the directory *omutils*, and enter the **print** command to display the data in the active registers.

The following table lists the key and info fields associated with OM group DSPRMAN.

Key field	Info field
nil_type_id	sots_NODE_INFO

Related functional groups

The functional group SPM OC-3 Inter-Exchange Carrier (IEC) Trunking is associated with OM group DSPRMAN.

Registers

The following table lists the registers associated with OM group DSPRMAN and what they measure. For a description of a register, click on the register name.

Registers for OM group DSPRMAN

Register name	Measures
COTDENY	COT requests denied
COTUTIL	Percent utilization of COT resources
COTFAIL	COT failed for the CCS7 trunk
COTHI	High watermark for COT allocations from the COT pool
COTLOST	Number of COT resources lost by or removed from resource management users
COTLOW	COT low watermark threshold violations on the node-level COT pool
DTMFDENY	DTMF resources denied
DTMFHI	High watermark for DTMF allocations from the DTMF pool
DTMFLOST	DTMF resources lost by or removed from resource management users
DTMFLOW	DTMF low watermark threshold violations on the node-level DTMF pool
DTMFUTIL	Percent utilization of DTMF resources
MFDENY	MF resources denied (call processing failed to allocate a call)
MFHI	High watermark for MF allocations from the MF pool
MFLOST	Number of MF resources lost by or removed from resource management users
MFLOW	Multi frequency (MF) low watermark threshold violations on the node-level MF pool

Registers for OM group DSPRMAN

Register name	Measures
MFUTIL	Average percent utilization of MF resources
TONEDENY	TONESYSN resources denied
TONEHI	High watermark for TONESYSN resource allocations from the TONESYSN pool
TONELOST	Number of TONESYSN resources removed from or lost by resource management users
TONELOW	TONESYSN low watermark threshold violations on the node-level TONESYSN pool
TONEUTIL	Percent utilization of TONESYSN resources

COTDENY

Register type
Peg

Description
COTDENY counts the number of requests for continuity tests that are denied.

Associated registers
COTUTIL must be at 100% before COTDENY increments the peg register.

Extension registers
None

Associated logs
None

COTUTIL

Register type
Peg

Note: COTUTIL represents COT resource usage, but the SPM reports it to the CM as a peg register. The resource management computes the percentage locally on the SPM at a scan rate of 100 seconds, and a local peg is updated. At the end of the collection period, the SPM sends the average of all averages for scan intervals to the CM as a peg register.

Description
COTUTIL calculates the percentage of the total COT resources in the node-level pool allocated to resource management users (such as call processing). COTUTIL is the average percentage of utilization for all scan periods during a collection/transfer period. COTUTIL does not indicate the total number in use at the end of a scan or transfer period.

Associated registers
None

Extension registers
None

Associated logs
None

COTFAIL

Register type
Peg

Description
COTFAIL counts the CCS7 COT failures for trunks on each SPM node. The DSP application that runs on the RM reports these events, which are pegged on the active common equipment module (CEM) of each SPM.

Associated registers
None

Extension registers
None

Associated logs
None

COTHI

Register type
Peg

Description
COTHI counts the highest number of COT resources allocated from the node-level pool during a collection/transfer period. Its value starts at zero at the beginning of each collection/transfer period for the node. An update to COTHI occurs when a new high watermark is reached in the collection period, that is, when the total number of resources allocated from the COT pool exceeds the previous high watermark for the pool.

Associated registers
None

Extension registers
None

Associated logs
None

COTLOST

Register type
Peg

Description
COTLOST counts the COT resources removed from or lost by resource management users (such as call processing).

Associated registers
None

Extension registers
None

Associated logs
None

COTLOW

Register type
Peg

Description
COTLOW counts the number of low watermark threshold violations on the SPM node-level pool of COT resources since the last collection period. If the number exceeds the threshold once, resource exhaustion could occur on the node. If the number exceeds the threshold more than once, the user (call processing) is operating around the threshold for extended periods because the node needs more resources. To add more resources, provision another RM or SPM to support the call rate and mix.

Associated registers
COTUTIL - The percentage of COTs at the node level is high when it exceeds the low watermark threshold. To calculate the COT percentage, use the threshold value and the queue size at the SPM node level at the MAP terminal.

Extension registers
None

Associated logs
SPM350

DTMFDENY

Register type
Peg

Description
DTMFDENY counts the number of DTMF resources that are denied.

Associated registers
DTMFUTIL must be at 100% before DTMFDENY increments the peg register.

Extension registers
None

Associated logs
None

DTMFHI

Register type
Peg

Description
DTMFHI counts the highest number of DTMF resources allocated from the node-level pool during a collection/transfer period. Its value starts at zero at the beginning of each collection/transfer period for the node. An update to DTMFHI occurs when a new high watermark is reached in the collection period, that is, when the total number of resources allocated from the DTMF pool exceeds the previous high watermark for the pool.

Associated registers
None

Extension registers
None

Associated logs
None

DTMFLOST

Register type
Peg

Description
DTMFLOST counts the DTMF resources removed from users of SPM resource management (such as call processing) during sparing.

Associated registers
None

Extension registers
None

Associated logs
None

DTMFLOW

Register type
Peg

Description
DTMFLOW counts the number of low watermark threshold violations on the SPM node-level pool of DTMF resources since the last collection period. If the number exceeds the threshold once, resource exhaustion could occur on the node. If the number exceeds the threshold more than once, the user (call processing) is operating around the threshold for extended periods because the node needs more resources. To add more resources, provision another RM or SPM to support the call rate and mix.

Associated registers
DTMFUTIL - The percentage of DTMFs at the node level is high when it exceeds the low watermark threshold. To calculate the DTMF percentage, use the threshold value and the queue size from the SPM node level at the MAP terminal.

Extension registers
None

Associated logs
SPM350

DTMFUTIL

Register type
Peg

Note: DTMFUTIL represents DTMF resource usage, but the SPM reports it to the CM as a peg register. The resource management computes the percentage locally on the SPM at a scan rate of 100 seconds. A local peg is updated. At the end of the collection period, the SPM sends the average of averages for all scan intervals to the CM as a peg register.

Description
DTMFUTIL calculates the percentage of total DTMF resources in the node-level pool allocated to users of resource management (such as call processing). DTMFUTIL is the average percentage of utilization for all scan periods during a collection/transfer period. It does not indicate the total number in use at the end of a scan or transfer period.

Associated registers
None

Extension registers
None

Associated logs
None

MFDENY

Register type
Peg

Description
MFDENY counts the number of multi-frequency resources denied because call processing failed to allocate a call.

Associated registers
MFUTIL must be at 100% before MFDENY increments the peg register.

Extension registers
None

Associated logs
None

MFHI

Register type
Peg

Description
MFHI counts the highest number of MF resources allocated from the node-level pool during a collection/transfer period. Its value starts at zero at the beginning of each collection/transfer period for the node. An update to MFHI occurs when a new high watermark is reached in the collection period, that is, when the total number of resources allocated from the MF pool exceeds the previous high watermark for the pool.

Associated registers
None

Extension registers
None

Associated logs
None

MFLOST

Register type
Peg

Description
MFLOST counts the MF resources taken away from users of SPM resource management (such as call processing) because of sparing.

Associated registers
None

Extension registers
None

Associated logs
None

MFLOW

Register type
Peg

Description
MFLOW counts the number of low watermark threshold violations on the SPM node-level pool of MF resources since the last collection period. If the number exceeds the threshold once, resource exhaustion

could occur on the node. If the number exceeds the threshold more than once, the user (call processing) is operating around the threshold for extended periods because the node needs more resources. To add more resources, provision another RM or SPM to support the call rate and mix.

Associated registers
MFUTIL - The percentage of MFs at the node level is high when it exceeds the low watermark threshold. To calculate the MF percentage, use the threshold value and the queue size from the SPM node level at the MAP terminal.

Extension registers
None

Associated logs
SPM350

MFUTIL

Register type
Peg

Note: MFUTIL represents MF resource usage, but the SPM reports it to the CM as a peg register. The resource management computes the percentage locally on the SPM at a scan rate of 100 seconds, and a local peg is updated. At the end of the collection period, the SPM sends the average of averages for all scan intervals to the CM as a peg register.

Description
MFUTIL calculates the percentage of the total MF resources in the node-level pool allocated to users of resource management (such as call processing). MFUTIL is the average percentage of utilization for all scan periods during a collection/transfer period. It does not indicate the total number in use at the end of a scan or transfer period.

Associated registers
None

Extension registers
None

Associated logs
None

TONEDENY

Register type
Peg

Description
TONEDENY counts the number of tone synthesizer (TONESYSN) resources that are denied.

Associated registers
TONEUTIL must be at 100% before TONEDENY increments the peg register.

Extension registers
None

Associated logs
None

TONEHI

Register type
Peg

Description
TONEHI counts the highest number of TONE resources allocated from the node-level pool during a collection/transfer period. Its value starts at zero at the beginning of each collection/transfer period for the node. An update to TONEHI occurs when a new high watermark is reached in the collection period, that is, when the total number of resources allocated from the TONE pool exceeds the previous high watermark for the pool.

Associated registers
None

Extension registers
None

Associated logs
None

TONELOST

Register type
Peg

Description
TONELOST counts the TONE resources removed from users of SPM resource management (such as call processing) because of sparing.

Associated registers
None

Extension registers
None

Associated logs
None

TONELOW

Register type
Peg

Description
TONELOW counts the number of low watermark threshold violations on the SPM node-level pool of TONE resources since the last collection period. If the number exceeds the threshold once, resource exhaustion could occur on the node. If the number exceeds the threshold more than once, the user (call processing) is operating around the threshold for extended periods because the node needs more resources. To add more resources, provision another RM or SPM to support the call rate and mix.

Associated registers
TONEUTIL - The percentage of TONEs at the node level is high when it exceeds the low watermark threshold. To calculate the TONEs percentage, use the threshold value and the queue size from the SPM node level at the MAP terminal.

Extension registers
None

Associated logs
SPM350

TONEUTIL

Register type
Peg

Note: TONEUTIL represents TONE resource usage, but the SPM reports it to the CM as a peg register. The resource management computes the percentage locally on the SPM at a scan rate of 100

seconds, and a local peg is updated. At the end of the collection period, the SPM sends the average of averages for all scan intervals to the CM as a peg register.

Description
TONEUTIL calculates the percentage of the total TONE resources in the node-level pool allocated to users of resource management (such as call processing). TONEUTIL is the average percentage of utilization for all scan periods during a collection/transfer period. It does not indicate the total number in use at the end of a scan or transfer period.

Associated registers
None

Extension registers
None

Associated logs
None

DTSR

Description

OM group Dial Tone Speed Recording (DTSR) records information on the ability of the switch to return a dial tone for a host site in three seconds. The OM group SITE records results for remote sites.

The following feature packages provide OMs for DTSR tests:

- NTX901AA provides OMs for offices with line modules (LM)
- NTX270AA provides OMs for offices with LMs and line concentrating modules (LCM), remote concentrator terminals (RCT), or remote concentrator SLC-96 (RCS)

The DTSR system simulates a series of call originations. The dial tone speed test sends commands to two LMs at each site every four seconds that cause the LMs to send messages to the central control (CC). The messages appear to be originations from a dial pulse (DP) and a Digitone line, respectively. The central processor uses the normal processing code to find a path through the originating LM. The CC sends the LM a message that the setup is complete.

For Digitone calls, the central processor uses the code to find a dual-tone multi-frequency (DTMF) receiver and a network path to the DTMF. Network blockage causes a dial tone delay when the call is a Digitone call that requires a receiver.

The LM returns a message that indicates if the LM takes more than three seconds to pass dial tone to the false line. If the CC does not receive the message before the next test, it pegs the delay count register. The CC pegs the register for message delays that are more than three seconds. A different LM directs each call. The false source of these calls alternates between line drawers in the LM.

DTSR counts appear in pairs: The first counts all test calls. The second counts test calls with a dial tone delay of more than three seconds.

The DTSTESTC is the total number of test call originations that the DTSR generates for each call from dial pulse and Digitone lines. The DTSDLYPC is the number of test call originations that take longer than three seconds to receive a dial tone.

The DTSR on LCMs, RCTs, or RCS involves call timing. The system times originations from the time of detection in the LM until the time the dial tone returns. The system updates counts from LCMs, RCTs, or

RCS every fifteen minutes. The assigned OM transfer period does not affect the update.

The DTSR deactivates if a switch has Digitone receiver overflow. The DTSR automatically deactivates during degradation if the office parameter DTSR_AUTO_DEACTIVATION_ENABLE is set to TRUE in table OFCENG.

The DTSR deactivates in both host and remote locations. The deactivation affects the values in groups DTSR and SITE. The DTSR automatically reactivates when the degradation passes. OM groups are affected in the same way as when a DTSR is deactivated manually from a MAP terminal. DTSR registers do not increase when DTSR deactivates during a degradation.

The system generates log DTSR100 when DTSR deactivates, and log DTSR101 when DTSR returns to service.

The following table lists the key and info fields associated with OM group DTSR.

Key field	Info field
For offices with LMs: OLD_DTSR_KEY	None
For offices with LMs, RCTs, or RCS: DTSR_KEY	None

For offices that have LMs, the OM group DTSR provides one tuple for each receiver type. For offices that have LCMs, RCTs, or RCS, each key type has one tuple. The following table lists the key types.

Key types (Sheet 1 of 2)

Type	Description
LMDP	Line Module Dial Pulse
LMDT	Line Module Digitone
LCMDP	LCM Dial Pulse
LCMDT	LCM Digitone
LCMKS	LCM Key-driven Set

Key types (Sheet 2 of 2)

Type	Description
RCTDP	Remote Concentrator Terminal Dial Pulse
RCTDT	Remote Concentrator Terminal Digitone
RCSDP	RCS Dial Pulse
RCSDT	RCS Digitone

Related functional groups

The following functional groups that follow are associated with OM group DTSR:

- NT-40
- SuperNode

Registers

The following table lists the registers associated with OM group DTSR and what they measure. For a description of a register, click on the register name.

Registers for OM group DTSR

Register name	Measures
DELAY	Total number of calls with delay
DTSDLYPC	Delayed test call originations
DTSTESTC	Number of test calls
TOTAL	Total number of test calls

DELAY

Register type
Peg

Description
For LMDP and LMDT lines, DELAY counts test calls that have one of the following conditions:

- dial tone delay of more than three seconds. An abandoned call does not affect this count
- DTMF receiver queue overflow
- a previous DTSR test on the LM that is still in progress

A test starts on one LM for each site every four seconds. A high number of delayed calls indicates high switch use or a problem condition, like LM trouble or channel blockage. A high delay count for LMDT lines can indicate that there are not enough receivers available.

For LCMDP, LCMDT, LCMKS, RCTDP, RCTDT, RCSDP, and RCSDT lines, DELAY counts sample calls that have one of the following conditions:

- dial tone delay of more than three seconds
- overflow in the DTMF receiver
- an earlier DTSR test on the LM that is still in progress

For LCMs, RCTs, or RCS, DTSR measures the time of actual calls. The system times originations from the time of detection in the LM until the time the dial tone returns. Counts from the LCMs, RCTs, or RCS lines are updated every fifteen minutes. The assigned OM transfer period does not affect the update.

Under normal conditions, the number of delayed call originations is small. A high number of delayed calls indicates high switch use or a problem condition, like channel blockage. A high delay count for LCMs, RCTs, or RCS lines can indicate that there are not enough receivers available.

Associated registers
None

Extension registers
DELAY_2 (does not apply to LMDP OR LMDT)

Associated logs
None

DTSDLYPC

Register type
Peg

Description
Delayed test call originations (DTSDLYPC) counts test calls that have one of the following conditions:

- dial tone delay of more than three seconds
- receiver queue overflow
- an earlier DTSR test on the LM that is still in progress

A test starts on one LM for each site every four seconds. A high number of delayed calls indicates high switch use or a problem condition such as LM trouble or channel blockage. A high DTSDLPC count for Digitone lines can indicate that there are not enough receivers available.

Associated registers
None

Extension registers
None

Associated logs
None

DTSTESTC

Register type
Peg

Description
DTSTESTC increases after the system determines the result of the test.

Associated registers
None

Extension registers
None

Associated logs
None

TOTAL

Register type
Peg

Description
Total number of test calls (TOTAL) counts test calls on LMDP and LMDT lines.The register increases after the result of the test is

determined. The system updates the count of total calls every fifteen minutes.

For offices with LCMs, RCTs, or RCS lines, DTSR measures the time of calls. The system times originations from the time of detection in the LM until the time the dial tone returns.

Associated registers
None

Extension registers
TOTAL_2 (does not apply to LMDP and LMDT)

Associated logs
None

DTSRPM

Description

OM group Dial Tone Speed Recording on a Peripheral Module base (DTSRPM) records information about dial tone speed recording (DTSR). The DTSRPM provides information for each peripheral module (PM) and for all line concentrating devices (LCD) in the switch.

The DTSR on new peripherals measures the time of calls. The system times originations from the time of detection in the line module (LM) until the time the dial tone returns.

The extended PMs collect DTSR statistics from each LCD. Each LCD is packaged in a message and sent to the central control (CC). The CC stores the statistics for each LCD.

The following table lists the key and info fields associated with OM group DTSRPM. DTSRPM provides one tuple for each LCD.

Key field	Info field
No key field	DTSRPM_OMINFO contains • LCD number Range: 0 to 255 • site number Range: 0 to 63 • LCD type • bay or unit number Range: 0 to 999

Related functional groups

The line concentrating devices (LCD) functional group is associated with OM group DTSRPM.

Registers

The following table lists the registers associated with OM group DTSRPM and what they measure. For a description of a register, click on the register name

Registers for OM group DTSRPM

Register name	Measures
DGTDLY	Total number of digitone calls with a 3-second dial tone delay
DGTTOT	Total number of calls made on Digitone lines
DPLDLY	Total number of dial pulse calls that are delayed
DPLTOT	Total number of dial pulse calls
KSDLY	The total number of key-set calls with a 3-second dial tone delay
KSTOT	The total number of calls from key-set lines

DGTDLY

Register type
Peg

Description
DGTDLY counts calls that have Digitone signaling that have a dial tone delay of more than three seconds.

For line concentrating modules (LCM) and remote concentrating terminals (RCT), registers increase every five or fifteen minutes. The time between increments depends on whether the office has Engineering and Administrative Data Acquisition System/Network Management (EADAS/NM). For line modules (LM) and remote line modules (RLM), the register increases every four seconds.

Associated registers
None

Extension registers
None

Associated logs
None

DGTTOT

Register type
Peg

Description
DGTTOT counts calls made on lines with Digitone signaling during a given period of time. For LCMs and RCTs, registers increase every five or fifteen minutes, depending on whether the office has EADAS/NM. For LMs and RLMs, this register increases every four seconds.

Associated registers
None

Extension registers
None

Associated logs
None

DPLDLY

Register type
Peg

Description
DPLDLY counts calls with dial tone delays of more than three seconds. The calls are made on lines with dial pulse (DP) signaling. For LCMs and RCTs, registers increase every five or fifteen minutes, depending on whether the office has EADAS/NM. For LMs and RLMs, this register increases every four seconds.

Note: When P-side channel blocking occurs in an XPM, dial tone cannot be given no matter how long the subscriber stays off hook. Registers DPLTOT and DPLDLY include attempts and delays caused by the channel blockage to DT and DP lines.

Associated registers
None

Extension registers
None

Associated logs
None

DPLTOT

Register type
Peg

Description
DPLTOT counts calls made on lines with DP signaling during a given period of time. For LCMs and RCTs, registers increase every five or fifteen minutes, depending on whether the office has EADAS/NM. For LMs and RLMs, this register increases every four seconds.

Note: When P-side channel blocking occurs in an XPM, dial tone cannot be given no matter how long the subscriber stays off hook. Registers DPLTOT and DPLDLY include attempts and delays caused by the channel blockage to DT and DP lines.

Associated registers
None

Extension registers
None

Associated logs
None

KSDLY

Register type
Peg

Description
KSDLY counts calls that have a dial tone delay of longer than three seconds during a given period of time. The calls are made on lines with key-set signaling. For LCMs and RCTs, registers increase every five or fifteen minutes, depending on whether the office has EADAS/NM. For LMs and RLMs, this register increases every four seconds.

Associated registers
None

Extension registers
None

Associated logs
None

KSTOT

Register type
Peg

Description
KSTOT counts calls made on lines with key-set signaling during a certain period of time. For LCMs and RCTs, registers increase every five or fifteen minutes, depending on whether the office has EADAS/NM. For LMs and RLMs, this register increases every four seconds.

Associated registers
None

Extension registers
None

Associated logs
None

DUAQ

Description

OM group Dial-up Autoquote (DUAQ) counts activities of the dial-up autoquote feature. When a hotel-originated call ends and the receiving device is identified as dial-up autoquote (DUAQ), the billing record is placed in a DUAQ queue. Once the collection threshold of records held is reached or the holding time for each hotel queue expires, a route to the DUAQ device is determined based on the device number and the device directory number (DEVDN).

A digital modem is connected to an outgoing trunk on the route. The DEVDN is sent on the route to obtain a network connection with the DUAQ device and an ANSWER message is received in reply. ANSWER is followed by a CARRIER message and an acknowledge (ACK) message from the DUAQ device. The billing records are transmitted to the hotel. When the last record is transmitted, the network path is released. Whenever billing records are ready for transmission, the network path is reestablished.

The following table lists the key and info fields associated with OM group DUAQ.

Key field	Info field
None	None

Related functional groups

The TOPS functional group is associated with the OM group DUAQ.

Registers

The following table lists the registers associated with OM group DUAQ and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DUAQ (Sheet 1 of 2)

Register name	Measures
DAQATT	Dial-up autoquote attempts
DAQNOACK	Dial-up autoquote no acknowledgement
DAQNOANS	Dial-up autoquote no answer

Registers for OM group DUAQ (Sheet 2 of 2)

Register name	Measures
DAQNOCAR	Dial-up autoquote no carrier
DAQNODM	Dial-up autoquote no digital modem
DAQNOTRK	Dial-up autoquote no trunk
DAQSUCC	Dial-up autoquote successful
DAQTXERR	Dial-up autoquote transmission error

DAQATT

Register type
Peg

Description
DAQATT counts call attempts at dial-up autoquote devices.

Associated registers
None

Extension registers
None

Associated logs
None

DAQNOACK

Register type
Peg

Description
DAQNOACK is incremented when the dial-up autoquote device does not respond with acknowledgement. After a maximum number of attempts, specified by DUAQ_MAX_RETRY, the recording units are routed to a hotel billing information center (HOBIC) operator, who verbally informs the hotel of the billing records.

Associated registers
None

Extension registers
None

Associated logs
None

DAQNOANS

Register type
Peg

Description
DAQNOANS is incremented when the dial-up autoquote devices do not answer. After a maximum number of attempts, specified by DUAQ_MAX_RETRY, the recording units are routed to a HOBIC operator, who verbally informs the hotel of the billing record.

Associated registers
None

Extension registers
None

Associated logs
None

DAQNOCAR

Register type
Peg

Description
DAQNOCAR is incremented when a carrier is not received from DUAQ devices. After a maximum number of attempts, specified by DUAQ_MAX_RETRY, the recording units are routed to a HOBIC operator, who verbally informs the hotel of the billing record.

Associated registers
None

Extension registers
None

Associated logs
None

DAQNODM

Register type
Peg

Description
DAQNODM is incremented when a digital modem is unavailable for dial-up autoquote device calls. When this register is incremented, the recording units are routed to a HOBIC operator, who verbally informs the hotel of the billing record.

Associated registers
None

Extension registers
None

Associated logs
None

DAQNOTRK

Register type
Peg

Description
DAQNOTRK is incremented when a trunk is unavailable for dial-up autoquote calls. When this register is incremented, the recording units are routed to a HOBIC operator, who verbally informs the hotel of the billing record.

Associated registers
None

Extension registers
None

Associated logs
None

DAQSUCC

Register type
Peg

Description
DAQSUCC counts dial-up autoquote calls that were completed successfully.

Associated registers
None

Extension registers
None

Associated logs
None

DAQTXERR

Register type
Peg

Description
DAQTXERR is incremented when failure occurs during transmission of records to dial-up autoquote devices. After a maximum number of attempts, specified by DUAQ_MAX_RETRY, the recording units are routed to a HOBIC operator, who verbally informs the hotel of the billing record.

Associated registers
None

Extension registers
None

Associated logs
None

DUAQMOD

Description

OM group Dial-up Autoquote Modem (DUAQMOD) counts dial-up autoquote (DUAQ) modem activities.

Modems that are available for DUAQ application are placed in availability queues. Modems that are unavailable for DUAQ application may be manual, system, or trunk busy. When a request for a DUAQ modem is received and a suitable modem is available, the request is satisfied immediately. If no free modem is available, a message is sent to the network.

The following table lists the key and info fields associated with OM group DUAQMOD.

Key field	Info field
BD300: DUAQ modems at 300 baud rate. BD1200: DUAQ modems at 1200 baud rate in table DQMODEM.	Number of modems of each type that are available

Related functional groups

The TOPS functional group is associated with the OM group DUAQMOD.

Registers

The following table lists the registers associated with OM group DUAQMOD and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DUAQMOD

Register name	Measures
DUAQFAIL	Dial-up autoquote fail
DUAQMBU	Dial-up autoquote manual busy
DUAQREQ	Dial-up autoquote request
DUAQSBU	Dial-up autoquote system-busy
DUAQTRU	Dial-up autoquote trunk-busy

DUAQFAIL

Register type
Peg

Description
DUAQFAIL counts failed dial-up autoquote modem requests for an available modem, the calling procedure identification (cp_id) of the incoming trunk, or a link to the call process. The failed request is reported to the calling procedure. No further action is taken.

Associated registers
None

Extension registers
None

Associated logs
None

DUAQMBU

Register type
Peg

Description
DUAQMBU counts dial-up autoquote modems that are manual busy. Manual busy states are manual busy and network management busy.

Associated registers
None

Extension registers
None

Associated logs
None

DUAQREQ

Register type
Peg

Description
DUAQREQ counts requests for dial-up autoquote modems, regardless of the request outcome.

Associated registers
None

Extension registers
None

Associated logs
None

DUAQSBU

Register type
Usage

Scan rate
100 seconds

Description
DUAQSBU records dial-up autoquote modems that are system busy. System busy states are system busy, remote busy, carrier fail, and deloaded.

Associated registers
None

Extension registers
None

Associated logs
None

DUAQTRU

Register type
Usage

Scan rate
100 seconds

Description
DUAQSBU records whether dial-up autoquote modems are trunk busy. Trunk busy states are call processing busy, call processing deload, initialize, and lockout.

Associated registers
None

Extension registers
None

Associated logs
None

DUTLGEN

Description

OM group DMS Universal Transport Layer (DUTLGEN) measures activity within the DMS universal transport layer in an office, including:

- system events
- connect events
- refuse events
- disconnect events
- protocol errors
- system errors

The following table lists the key and info fields associated with OM group DUTLGEN.

Key field	Info field
None	None

Related functional groups

The Enhanced Input Output Controller functional group is associated with OM group DUTLGEN.

Registers

The following table lists the registers associated with OM group DUTLGEN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group DUTLGEN (Sheet 1 of 2)

Register name	Measures
DUTLCOEV	DMS universal transport layer connect events
DUTLDIEV	DMS universal transport layer disconnect events
DUTLPRER	DMS universal transport layer protocol errors
DUTLREEV	DMS universal transport layer refuse events

Registers for OM group DUTLGEN (Sheet 2 of 2)

Register name	Measures
DUTLSYER	DMS universal transport layer system errors
DUTLSYEV	DMS universal transport layer system events

DUTLCOEV

Register type
Peg

Description
DUTLCOEV counts the number of connect events that occur in the DMS universal transport layer. An example of a connect event is a T-connect request.

Associated registers
None

Extension registers
None

Associated logs
DUTL101

DUTLDIEV

Register type
Peg

Description
DUTLDIEV counts the number of disconnect events that occur in the DMS universal transport layer. An example of a disconnect event is the close of a network connection.

Associated registers
None

Extension registers
None

Associated logs
DUTL103

DUTLPRER

Register type
Peg

Description
DUTLPRER counts the number of protocol errors that occur in the DMS universal transport layer.

Associated registers
None

Extension registers
None

Associated logs
DUTL198

DUTLREEV

Register type
Peg

Description
DUTLREEV counts the number of refuse events that occur in the DMS universal transport layer. A refuse event occurs when a session request for connection receives a disconnect message.

Associated registers
None

Extension registers
None

Associated logs
DUTL102

DUTLSYER

Register type
Peg

Description
DUTLSYER counts the number of system errors that occur in the DMS universal transport layer.

Associated registers
None

Extension registers
None

Associated logs
DUTL199

DUTLSYEV

Register type
Peg

Description
DUTLSYEV counts the number of system events that occur in the DMS universal transport layer. An example of a system event is bringing the network up.

Associated registers
None

Extension registers
None

Associated logs
DUTL100

EACARR

Description

OM group Equal Access Carrier Measurements (EACARR) provides information on equal access measurements for each carrier that connects to the access tandem (AT). The EACARR makes measurements for each InterLATA carrier (IC) or international carrier (INC).

The following table lists the key and info fields associated with OM group EACARR.

Key field	Info field
IC_INC_CARRIER_NAME	None

The CARRNAME in table OCCINFO defines the carrier names.

Related functional groups

The Access Tandem functional group is associated with OM group EACARR.

Registers

The following table lists the registers associated with OM group EACARR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group EACARR (Sheet 1 of 2)

Register name	Measures
EAACKFL-U.S. only	Equal access acknowledgement failures
EADOMES-U.S. only	Equal access domestic calls
EADOMPIC	Equal access domestic PIC calls
EADOMXXX	Equal access domestic non-PIC calls
EAINTL-U.S. only	Equal access international calls
EAINTRM	Equal access incoming interim calls
EAINTPIC	Equal access international PIC calls

Registers for OM group EACARR (Sheet 2 of 2)

Register name	Measures
EAINTXXX	Equal access international non-PIC calls
EAWNKFL-U.S. only	Equal access wink failures

EAACKFL-U.S. only

Register type
Peg

Description
EAACKFL counts timeouts that occur before an acknowledgement wink from the carrier. Register EAACKFL increases only when the end office clears the forward connection. When the end office does not respond to the absence of the acknowledgement, the end office clears the forward connection.

The following office parameters in table OFCSTD define timeout periods.

- EA_REC_MAX_WK_TIME
- EA_REC_SUB_PRE_WK_TIME
- EA_REC_1ST_PRE_WK_TIME

Associated registers
EADOMES-U.S. only, EAINTL-U.S. only, EAINTRM, EAWNKFL-U.S. only

Extension registers
None

Associated logs
None

EADOMES-U.S. only

Register type
Peg

Description
EADOMES counts incoming domestic equal access and LATA equal access system (LEAS) IC/INC calls. These carriers are both Primary InterLATA (PIC) and non-PIC carriers. The EADOMES counts incoming calls to the access tandem for a specified carrier. When the system attempts to complete a call, the register increases even if the call does not complete. This register also counts domestic calls that originate from the equal access end office (EAEO) to that carrier.

Associated registers
None

Extension registers
None

Associated logs
None

EADOMPIC

Register type
Peg

Description
EADOMPIC counts originating equal access and LATA equal access system (LEAS) domestic PIC calls destined for a specified carrier.

Associated registers
None

Extension registers
None

Associated logs
None

EADOMXXX

Register type
Peg

Description
EADOMXXX counts originating equal access and LEAS domestic non-PIC calls destined for a specified carrier.

Associated registers
None

Extension registers
None

Associated logs
None

EAINTL-U.S. only

Register type
Peg

Description
EAINTL counts incoming international equal access and LEAS, both PIC and non-PIC calls. The EAINTL counts the calls to the access tandem that are for a specified carrier. When the system attempts to complete a call, the register increases even if the call does not complete.

This register increases for all international calls from the equal access end office (EAEO) to a specified carrier.

Associated registers
None

Extension registers
None

Associated logs
None

EAINTRM

Register type
Peg

Description
EAINTRM counts incoming interim (950-YXXX) calls to the access tandem that are for a specified carrier. Register EAINTRM also counts 950-YXXX calls that originate from the EAEO to the same carrier. When the system attempts to complete a call, the register increases even if the call cannot complete.

Associated registers
None

Extension registers
None

Associated logs
None

EAINTPIC

Register type
Peg

Description
EAINTPIC counts originating equal access and LEAS international PIC calls destined for a specified carrier.

Associated registers
None

Extension registers
None

Associated logs
None

EAINTXXX

Register type
Peg

Description
EAINTXXX counts originating equal access and LEAS international non-PIC calls destined for a specified carrier.

Associated registers
None

Extension registers
None

Associated logs
None

EAWNKFL-U.S. only

Register type
Peg

Description
EAWNKFL counts timeouts that occur before the first start pulsing wink from the InterLATA carrier (IC). Register EAWNKFL counts timeouts on domestic and international calls.

The following office parameters in table OFCSTD define timeout periods.

- EA_REC_MAX_WK_TIME
- EA_REC_SUB_PRE_WK_TIME
- EA_REC_1ST_PRE_WK_TIME

Associated registers
EADOMES-U.S. only, EAINTL-U.S. only, EAINTRM, EAACKFL-U.S. only

Extension registers
None

Associated logs
None

EADLD

Description

OM group Special Number Handling (EADLD) provides information applicable to a specific market. This OM group does not apply to general UCS DMS-250 switch users. When registers for this group appear in the general UCS DMS-250 user's switch, their value is always is 0.

When this OM group does apply, the information needs to be available to the offline processor or EADAS machine.

The following table lists the key and info fields associated with OM group EADLD:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group EADLD.

Registers

The following table lists the registers associated with OM group EADLD and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group EADLD

Register name	Measures
EA	Special number 1 type calls
EL	Special number 2 type calls

EA

Register type
Peg

Description
EA counts the total number of special number type 1 calls received by the UCS DMS-250 switch.

Associated registers
None

Extension registers
None

Associated logs
None

EL

Register type
Peg

Description
EL counts the total number of special number type 2 calls received by the UCS DMS-250 switch.

Associated registers
None

Extension registers
None

Associated logs
None

EASHRTRK-U.S. only

Description

OM group Equal Access Shared Trunk Group Traffic Measurements (EASHRTRK) counts outgoing calls and overflows on trunk groups from end offices. EASHRTRK counts access tandems that carry calls for multiple interexchange carriers (IEC).

An equal access end office and an access tandem use shared trunk groups. These trunk groups are shared because they carry calls to and from more than one interexchange carrier.

The following table lists the key and info fields associated with OM group EASHRTRK.

Key field	Info field
C_INC_CARRIER_NAME. This field contains the name of the other common carrier that receives its name in the field OCCNAME in table OCCNAME.	None

Related functional groups

The Access Tandem functional group is associated with OM group EASHRTRK.

Registers

The following table lists the registers associated with OM group EASHRTRK and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group EASHRTRK

Register name	Measures
STGOPEG	Shared trunk group outgoing count
STGOVFL	Shared trunk group call attempt overflows
STGUSG	Shared trunk group connect usage

STGOPEG

Register type
Peg

Description
STGOPEG counts outgoing calls on a shared trunk group. The register increases after the system selects an available outgoing trunk, makes an internal network connection, and seizes the trunk.

Associated registers
None

Extension registers
None

Associated logs
None

STGOVFL

Register type
Peg

Description
STGOVFL counts call attempts that overflow the last shared trunk group in the routing chain.

This register increases when the system encounters the pseudo-CLLI STGOVFL in a route list. Enter the pseudo-CLLI STGOVFL in all route lists. The route lists must contain shared trunk groups from the equal access end office (EAEO) to the access tandem (AT). Enter the pseudo-CLLI STGOVFLIt at the end of the route list to represent the last shared trunk group route to the AT.

Associated registers
None

Extension registers
None

Associated logs
ATB100

STGUSG

Register type
Usage

Scan rate
100 s

Description
STGUSG records if the trunk groups connect an end office that has an access tandem.

Associated registers
None

Extension registers
None

Associated logs
None

EATSMS

Description

OM group Equal Access Traffic Separation/traffic Analysis (EATSMS) provides information about call attempts, call set-up time, and call connection time. EATSMS provides information at carrier separation number and outgoing trunk separation number intersections. The group counts calls that the system cannot deliver to that intersection because an outgoing trunk is not available.

EATSMS separates traffic from one point to the next point. The group can separate three components of each call:

- point-to-point attempt increase
- set-up time
- point-to-point connect time

EATSMS separates carrier and trunk group traffic into the following call types:

- intraLATA-interstate
- interLATA-intrastate
- interLATA-intrastate call types

The other common carrier separation number (OCCSEPNO) in table OCCINFO identifies a carrier for traffic separation. The range of values for OCCSEPNO is 0 to 127.

Field TRAFSNO indicates the outgoing trunk group in tables TRKGRP, ANNS, TONES, or STN.

Table OCCTSINT indicates four fields for each instance of carrier and trunk group. The fields are:

- LDSRA for intraLATA-intrastate calls
- LDIRA for intraLATA-interstate calls
- LDSER for interLATA-intrastate calls

The following table lists the key and info fields associated with OM group EATSMS.

Key field	Info field
OCCTS_REG_NOS. An integer in the range 0 to 2047 as assigned to the carrier and trunk group intersection in fields LDSRA, LDIRA, LDSER, and LDIER in table OCCTSINT.	None

The following office parameters apply:

- NO_OCCTS_OM_REGISTERS in table OFCENG specifies the maximum number of OM registers allocated for EA traffic separation.
- OCCT_DEFAULT_REG_LOG in table OFCVAR controls the production of the default register log report EATS100. The system generates this log when traffic is sent to the default register.
- OCCTS_ENHANCED_FEATURE appears in table OFCENG.To activate the EA traffic separation option set this feature to Y (yes). The size of the maximum matrix is 128 by 128 and the OM register allocation is 2048.

Related functional groups

The Access Tandem functional group is associated with OM group EATSMS.

Registers

The following table lists the registers associated with OM group EATSMS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group EATSMS

Register name	Measures
OCCTSCU	OCC traffic separation connect usage
OCCTSOVF	OCC traffic separation overflow
OCCTSPEG	OCC traffic separation peg count
OCCTSSU	OCC traffic separation set-up usage

OCCTSCU

Register type
Usage

Scan rate
100 seconds

Description
OCCTSCU register records connections at carrier and trunk group intersections.

First the system collects set-up use at the intersection then the system can collect connect use. At the attempt point, the state of the call is set. On call connection the use scan begins to accumulate at the carrier and trunk group intersection.

There is no connect use for partial dial abandon calls. For overlap carrier selected calls, the system collects connect use for partial dial timeout calls. The system collects connect use at the carrier and treatment intersection when there is interdigit timeout.

Associated registers
None

Extension registers
OCCTSCU2

Associated logs
None

OCCTSOVF

Register type
Peg

Description
OCCTSOVF register counts overflow calls from a carrier and trunk group intersection.

Associated registers
None

Extension registers
None

Associated logs
None

OCCTSPEG

Register type
Peg

Description
OCCTSPEG register counts network connections at each carrier and trunk group intersection.

The carrier and treatment intersection counts partial dial timeout. Use the generic separation number 1 for partial dial abandon calls. Partial dial abandon calls are only counted if the call contains associated overlap carrier call selection (OCS). Calls are also counted when the call has equal access, or the system seizes the trunk.

When the system cannot determine if the call is an equal access call, the system does not count the false state abandon.

Associated registers
None

Extension registers
OCCTSPEG2

Associated logs
None

OCCTSSU

Register type
Peg

Description
OCCTSSU register is a record of the use set-up at each carrier and trunk group intersection. The set-up use is the number of seconds, between origination and connection of a call.

The Set-up count begins when the origination message arrives in the central control. For MF/DTMF trunks, this is the time of seizure. When the network connects to the first available destination terminal, the system calculates the time from origination to connection to a second. The system adds to the register at the carrier and trunk group intersection.

The system collects set-up use for partial dial timeout calls at the carrier and treatment intersection.

The system collects set-up use for false start abandon calls at the carrier by 7 intersection. The system collects set-up use for partial dial abandon calls at the carrier by 1 intersection.

For overlap carrier selected calls, the system collects set-up use at the carrier and trunk group intersection. The system collects this information as soon as enough digits are available to route the call. The system collects the information before all digits are collected. The set-up use is not collected at the carrier by 1 or carrier and treatment intersections even if the call is abandoned.

Associated registers
None

Extension registers
OCCTSSU2

Associated logs
None

EBSMSGCT

Description

OM group Electronic Business System Message Center (EBSMSGCT) registers provide information about the use of an electronic business set (EBS) as a message center. The registers count:

- attempts to activate or deactivate a message that waits on a set
- attempts to query the message waiting status of a set
- failures of message waiting queries because of feature restrictions

The system routes calls to the EBS if calls are not answered at the original destination. The EBS uses a single key operation to activate or deactivate message waiting indications at user stations. An EBS that functions as a message center has two function pairs of key/liquid crystal display (LCD). One pair is for message waiting indication (MWIDC) and one pair is for message waiting query (MWQRY). The message center user can have a 500/2500 set or a business set that has message waiting capability.

The system routes an indirect call to the message center because the called DN had one of the following features activated:

- Call Forward Don't Answer (CFD)
- Call Forward Busy (CFB)
- Call Forward All Calls

When the message center operator answers an indirect call, the MWIDC LCD displays the message waiting indication at the called station. If the MWIDC LCD is on, the message center did not already activate the called station. If the MWIDC LCD flashes, the message center already activated the call center. If the MWIDC LCD winks, the called station is disabled or does not have message waiting indication. Press the MWIDC key to activate the message waiting indication at the called station. The key will activate the message waiting indication if the MWIDC LCD is on and the caller left a message. The MWIDC LCD of the operator turns off. Field TRAFSNO indicates the outgoing trunk group in tables TRKGRP, ANNS, TONES, or STN.

A caller places a direct call to retrieve messages. When the message center operator answers a direct call, the MWIDC LCD indicates if messages are queued for the calling party. If the MWIDC LCD is on, the message waiting indication at the calling station is not already activated. The MWIDC LCD flashes to indicate an already activated message waiting indication at the calling station. The MWIDC LCD winks to indicate one of the following problems:

- the calling station is disabled or not equipped with message waiting
- the caller is not known
- an attendant has extended the calling party

Press the MWIDC key to deactivate the message waiting indication at the calling station when the MWIDC LCD flashes. The MWIDC LCD turns off. If the MWIDC LCD is on or winks, the message waiting indication at the calling station is disabled or not active. The operator must cancel the message waiting indication at the calling station if the station does not have a message waiting indicator. The operator presses the MWQRY key to cancel the message waiting indication. The MWIDC LCD turns off and the MWQRY LCD winks. The message center operator dials the directory number of the calling station and presses the MWQRY key. The MWQRY LCD turns off.

The following table lists the key and info fields associated with OM group EBSMSGCT.

Key field	Info field
key to EBSMSGCT. Identifies a maximum of 4096 customer groups	customer name as defined in field CUSTNAME in table CUSTHEAD

Related functional groups

The following functional groups are associated with OM group EBSMSGCT:

- EBS Electronic Business Set
- IBN Integrated Business System

Registers

The following table lists the registers associated with OM group EBSMSGCT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group EBSMSGCT

Register name	Measures
IDCATT	Indication attempts
QRYATT	Query attempts
QRYFAIL	Query failures

IDCATT

Register type
Peg

Description
IDCATT counts attempts to activate or deactivate message waiting on an electronic business set. To activate or deactivate message waiting, press the message waiting indication (MWIDC) key.

Associated registers
None

Extension registers
None

Associated logs
None

QRYATT

Register type
Peg

Description
QRYATT counts attempts to query the message waiting state of an electronic business set. To query the message waiting state, press the message waiting query (MWQRY) key.

Associated registers
None

Extension registers
None

Associated logs
None

QRYFAIL

Register type
Peg

Description
QRYFAIL counts message waiting query sequences that are attempted on indirect calls.

Associated registers
None

Extension registers
None

Associated logs
None

ECANRMAN

Description

OM group Echo Canceller Resource Management (ECANRMAN) measures for Echo Canceller (ECAN) resource events and usage, including:

- capacity
- faults that occur when ECAN fails to converge (Save Our Souls [SOS]) events
- the number of lost ECAN resources. ECAN resources can be lost after an attempt to spare a failed resource module (RM) that contains ECAN when no spare RM exists.

When the system requests an ECAN resource,

- if an ECAN resource is available in the ECAN pool, the resource management (RMAN) increments an internal usage counter for the total number of resources allocated from the pool.
- if the usage counter is greater than the current value of the high watermark (maximum number of resources allocated during the last scan period), RMAN updates the high watermark register for the scan period.
- if an ECAN resource agent gets a message from the resource it represents indicating that it has failed to converge (cancel the echo), RMAN increments the ECANFAIL register.

> ***Note:*** A convergence failure can be caused by the parameter limits of a resource, or by an algorithm failure.

Spectrum peripheral modules (SPM) use the SPM OM Transport System (SOTS) to report ECANRMAN to the computing module (CM). SOTS uses the Distributed Data Manager (DDM) to transport the data. For thirty-minute collection periods, data are collected every fifteen minutes. The measurement for the thirty-minute collection contains the combined data from each fifteen-minute transfer.

The OM base software on the CM receives the data for the active registers one minute before the end of the collection period. At the end of the collection period, all active registers become holding registers and the active registers become empty.

On the CM, the OMSHOW command displays the active registers with all zeros, except during the last minute of the collection period.

Therefore, to view the data, use the OMSHOW command to display the holding registers instead of the active registers.

To view the real-time data on an SPM, use the CM tool **remlogin** to log in remotely to the SPM, change to the directory *omutils*, and use the **print** command to display the data in the active registers.

The following table lists the key and info fields associated with OM group ECANRMAN.

Key field	Info field
nil_type_id	sots_NODE_INFO

Related functional groups

The functional group SPM OC-3 Inter-Exchange Carrier (IEC) Trunking is associated with OM group ECANRMAN.

Registers

The following table lists the registers associated with OM group ECANRMAN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ECANRMAN

Register name	Measures
ECANLOW	ECAN low watermark threshold violations on the node-level ECAN pool
ECANLOST	ECAN resources lost or removed from CallP
ECANDENY	ECAN requests denied
ECANFAIL	ECAN failures to converge (SOS) events
ECANUTIL	Percentage of utilization of ECANs
ECANHI	High watermark for ECAN usage

ECANLOW

Register type

Peg

Description
If an ECAN resource has been allocated to a (CallP) user, and if the number of free resources in the pool is at or below the low watermark threshold on the ECAN pool, RMAN increments ECANLOW. An alarm is also generated.

ECANLOW counts the number of low watermark threshold violations on the pool of ECAN resources from the last collection period. A low watermark being exceeded more than once in a collection period indicates that the (CallP) user operated around the threshold for a period of time. The total number of freed resources exceeded the threshold, but more resources were allocated and the threshold was exceeded again.

When operating at the threshold for a long period of time, it is likely that the user can exhaust the resources on the node. The corrective action is to provision another RM to support the call rate and mix.

Associated registers
ECANUTIL measures the percentage of ECANs that are used. The percentage of ECANs at the node level is considered high when it exceeds the low watermark threshold.

There is no mathematical relationship between the number of threshold violations (ECANLOW count) and the values of ECANUTIL or ECANHI. A mathematical relationship exists between the number of resources that are free and those that are in use. If the threshold is set to 60 per cent of the total number of resources in the pool, when the threshold is reached, the number of resources in use must equal 60 per cent and the number of free resources must equal 40 per cent of the total number in the pool.

Extension registers
None

Associated logs
SPM350

ECANLOST

Register type
Peg

Description
ECANLOST counts the number of ECAN resources that were removed from users (CallP) or SPM Resource Management that were caused by sparing actions.

Associated registers
None

Extension registers
None

Associated logs
None

ECANDENY

Register type
Peg

Description
The RMAN increments ECANDENY when an ECAN resource is not available from the ECAN pool.

Associated registers
ECANUTIL

Extension registers
None

Associated logs
None

ECANFAIL

Register type
Peg

Description
ECANFAIL counts the number of SOS messages to the resource agent that indicate when an ECAN resource detects a sustained degradation in performance.

If an ECAN resource agent gets a message from the resource indicating that it has failed to converge (cancel the echo), RMAN increments ECANFAIL.

Note: A convergence failure can be caused by parameter limits of a resource, or by an algorithm failure.

Associated registers
None

Extension registers
None

Associated logs
None

ECANUTIL

Register type
Peg

Note: ECANUTIL is produced as peg register at the CM, but represents ECAN resource usage. The percentage statistic is computed locally on the SPM by the resource manager (RMAN) at a scan rate of 100 seconds, and a local peg is updated. At the end of the collection period, the average of averages for all scan intervals is produced at the CM as a peg register.

Description
ECANUTIL measures the percentage of the total number of ECAN resources in the node-level pool that are allocated to CallP users of RMAN. This figure is the average percentage of utilization for all scan periods (scan rate=100 seconds) during collection and transfer periods. The figure does not indicate the total number of resources that are in use at the end of a scan or transfer period.

Associated registers
None

Extension registers
None

Associated logs
None

ECANHI

Register type
Peg

Description
ECANHI measures the highest number of ECAN resources that was allocated from the node-level pool during a collection or transfer period. The value is zero at the beginning of each collection or transfer period for the node. An update occurs when a new high watermark is reached in the collection period that exceeds the previous high watermark for the pool.

Associated registers
None

Extension registers
None

Associated logs
None

EIN2

Description

OM group European Intelligent Networks 2 (EIN2) is an extension of OM groups EIN and EIN1. The group contains registers for the international IN Call Party Handling (CPH) and bearer capability functionalities. For details about OM groups EIN and EIN1, refer to their respective sections in this document.

The register naming convention used in OM group EIN2 allows the user to determine the direction of the operation that contained the error. The last two letters of the register name indicate this direction as follows:

Register naming convention for OM group EIN2

Register names ending in	Indicate that an operation was in
SC	Service Switching Function (SSF) to Service Control Function (SCF) direction
CS	SCF to the SSF direction
CR	SCF to Specialized Resource Function (SRF) direction

The following table lists the key and info fields associated with OM group EIN2.

Key field	Info field
0 (single-key OM group)	None

Related functional groups

International IN SSP Rel 4.0 is associated with OM group EIN2.

Registers

The following table lists the registers associated with OM group EIN2 and what they measure. For a description of a register, click on the register name.

Registers for OM group EIN2

Register name	Measures
EINUKLSC	Unknown LegID
EINUKCSC	Unknown call segment ID
EINUKLCS	Unknown LegID error
EINUKCCS	Unknown call segment ID
EINEDP8H	EDP-8 (o_Mid_Call)
EINCPH9T	EIN ITU IN call party handling EDP-9
EINCTRBC	ConnetctToResource (CTR) INAP
EINDP2H	World Trade IN EDP-2
EINCGAPH	World Trade IN call gapping
EINACRPP	EIN charging report pending
EINACRPS	EIN apply charging report sent
EINCPHCU	EIN ITU IN call party handling cleanup
EINCPH4T	EIN ITU IN call party handling EDP-4 hit as transparent
EINCPH5T	EIN ITU IN call party handling EDP-5 hit as transparent
EINCPH6T	EIN ITU IN call party handling EDP-6 hit as transparent
EINCPH7T	EIN ITU IN call party handling EDP-7 hit as transparent
EINRTRGA	EIN call leg trigger
EINAUTOC	EIN auto-continue

EINUKLSC

Register type
Peg

Description
EINUKLSC counts the number of times an INAP operation is sent from the SSF to the SCF when the operation causes an error with reason *Unknown LegID*.

This occurs, for example, if the operation contains a legID parameter that is inappropriate for the current call segment association (CSA) on the SSP. In a stable two-party call with a controlling leg and a passive leg with a Leg ID of p1, an operation from the SSF with a legID of p2 causes an error flagged by the SCF.

Associated registers
None

Extension registers
None

Associated logs
None

EINUKCSC

Register type
Peg

Description
EINUKCSC counts the number of times an INAP operation is sent from the SSF to the SCF when the operation causes and error with reason *Unknown Call Segment ID*.

This occurs, for example, if the operation contains a callSegmentID parameter which is inappropriate for the current CSA on the SSP. In a stable two-party call having a single call segment with csID of 1, an operation sent from the SSF with a CallSegmentID parameter specifying a csID of 2 causes an error flagged by the SCF.

Associated registers
None

Extension registers
None

Associated logs
None

EINUKLCS

Register type
Peg

Description
EINUKLCS counts the number of times an INAP operation is sent from the SCF to the SSF when the operation causes an error with reason *unknown LegID*.

This occurs, for example, if the operation contains a legID parameter that is inappropriate for the current CSA on the SSP. In a stable two-party call with a controlling leg and a passive leg with a Leg ID of p1, an operation sent from the SCF with a legID of p2 causes an error flagged by the SSF.

Associated registers
None

Extension registers
None

Associated logs
EIN305

EINUKCCS

Register type
Peg

Description
EINUKCCS counts the number of times an INAP operation is sent from the SCF to the SSF when the operation causes an error with reason *Unknown Call Segment ID*.

This occurs, for example, if the operation contains a callSegmentID parameter which is inappropriate for the current CSA on the SSP. In a stable two-party call with a single call segment with csID of 1, an operation sent from the SCF with a callSegmentID parameter specifying a csID of 2 causes an error flagged by the SSF.

Associated registers
None

Extension registers
None

Associated logs
EIN305

EINEDP8H

Register type
Peg

Description
EINEDP8H counts the number of times the o_Mid_Call event detection point (EDP-8) is encountered. EDP-8 detects the mid-call event of the calling party pressing the # key.

Associated registers
None

Extension registers
None

Associated logs
None

EINCPH9T

Register type
Peg

Description
EINCPH9T counts the number of times EDP-9 (o_Disconnect) occurs when armed as Transparent during a call that is beyond the Stable 2-party state. The CS-2 Call Party Handling functionality requires the EDP-9 (o_Disconnect) to be armed on all call legs for the duration of the call so the SCO can maintain the integrity of the CSA of a call instance.

If a calling party disconnects in the M-Party Setup, Call On Hold, or Stable M-Party CVS, and o_Disconnect is set to transparent, ENCPH9T is pegged.

Enforcement of event detection point (EDP) arming in CPH is optional using table SERVINFO datafill. Entry NO_CPH_RULES in the INFO_INAP field is used to make the arming of failure EDPs optional. If datafilled, then the Called Party Handling (CPH) enforcement rules do NOT take effect (OFF). By default, this option is not datafilled, so the enforcement rules is turned ON.

Associated registers
None

Extension registers
None

Associated logs
None

EINCTRBC

Register type
Peg

Description
EINCTRBC counts the number of times a ConnectToResource (CTR) INAP operation is sent from the SCF to the SSF for calls that have an InitialDP bearerCapability parameter specifying 64 kbits/s unrestricted data. The CTR operation allows in-band interaction between a calling party and the integrated Specialized Resource Function (SRF) of the SSP. This is inappropriate for data calls, which are disconnected and sent to treatment.

Associated registers
None

Extension registers
None

Associated logs
EIN305

EINDP2H

Register type
Peg

Description
Register World Trade IN EDP-2 counts the number of times EDP-2 (Collect_Info) is encountered.

Associated registers
None

Extension registers
None

Associated logs
EIN301

EINCGAPH

Register type
Peg

Description
EINCGAPH counts the number of times a call matches Call Gapping criteria on the DMS-100 SSP, and the InitialDP for the call therefore is blocked.

Associated registers
None

Extension registers
None

Associated logs
EIN602

EINACRPP

Register type
Peg

Description
EINACRPP counts the number of times the ApplyCharging operation is received and successfully processed by the DMS-100 SSP, causing an ApplyChargingReport operation to be pending.

Note: Although EINACRPP is visible with the OMSHOW command, the ApplyCharging functionality is not implemented in EUR008.

Associated registers
EINACRPS

Extension registers
None

Associated logs
EIN301

EINACRPS

Register type
Peg

Description
EINACRPS counts the number of times the DMS-100 SSP successfully sends an ApplyChargingReport operation to the SCP.

Note: Although EINACRPS is visible with the OMSHOW command, the ApplyCharging functionality is not implemented in EUR008.

Associated registers
EINACRPP

Extension registers
None

Associated logs
EIN301

EINCPHCU

Register type
Peg

Description
EINCPHCU counts the number of times a call is sent to treatment because a clean-up of a non-IN call could not be completed.

Associated registers
None

Extension registers
None

Associated logs
None

EINCPH4T

Register type
Peg

Description
EINCPH4T records the number of times EDP-4 (Route_Select_Failure) occurs when armed as Transparent during a call that is beyond the Stable 2-party state.

Enforcement of Event Detection Point (EDP) arming in CPH is optional using table SERVINFO datafill. Entry NO_CPH_RULES in the INFO_INAP field is used to make the arming of failure EDPs optional.

If datafilled, then the Called Party Handling (CPH) enforcement rules do NOT take effect (OFF).

By default, this option is not datafilled, so the enforcement rules are turned ON.

Associated registers
None

Extension registers
None

Associated logs
None

EINCPH5T

Register type
Peg

Description
EINCPH5T counts the number of times EDP-5 (o_Busy) is encountered when armed as Transparent during a call that is beyond the Stable 2-party state.

Associated registers
None

Extension registers
None

Associated logs
None

EINCPH6T

Register type
Peg

Description
EINCPH6T counts the number of times EDP-6 (o_No_Answer) is encountered when armed as Transparent during a call that is beyond the Stable 2-party state.

Enforcement of Event Detection Point (EDP) arming in CPH is optional using table SERVINFO datafill. Entry NO_CPH_RULES within the INFO_INAP field is used to make the arming of failure EDPs optional.

If datafilled, then the Called Party Handling (CPH) enforcement rules will NOT take effect (OFF).

By default, this option is not datafilled, sot the enforcement rules are turned ON.

Associated registers
None

Extension registers
None

Associated logs
None

EINCPH7T

Register type
Peg

Description
EINCPH7T counts the number of times EDP-7 (o_Answer) occurs when armed as Transparent during a call that is beyond the Stable 2-party state.

Enforcement of Event Detection Point (EDP) arming in CPH is optional using table SERVINFO datafill. Entry NO_CPH_RULES in the INFO_INAP field is used to make the arming of failure EDPs optional. If datafilled, then the Called Party Handling (CPH) enforcement rules will NOT take effect (OFF).

By default, this option is not datafilled, so the enforcement rules are turned ON.

Associated registers
None

Extension registers
None

Associated logs
None

EINRTRGA

Register type
Peg

Description
EINRTRGA counts the number of times a IN call leg is allowed to trigger, and clears the existing dialogue.

Associated registers
None

Extension registers
None

Associated logs
None

EINAUTOC

Register type
Peg

Description
EINAUTOC counts the number of times that Auto-Continue is invoked.

Associated registers
None

Extension registers
None

Associated logs
None

EIUETHER

Description

OM group Ethernet Interface Unit Ethernet (EIUETHER) provides information about traffic at the Ethernet protocol level.

The OM group EIUETHER contains 22 registers that count:

- bytes that the Ethernet interface receives
- error-free unicast packets that the Ethernet interface receives
- error-free broadcast packets that the Ethernet interface receives
- received packets that the system discards because of resource limitations
- received packets that contain errors
- received packets that the system discards because the packets contain protocol that is not supported or not recognized
- bytes that are transmitted out of the Ethernet interface
- packets that are transmitted to a unicast Ethernet address
- packets that are transmitted to a broadcast Ethernet address
- outbound packets that the system discards because of resource limitations
- outbound packets that do not transmit because they contain errors

The system keeps the peg counts in the EIU. The system transfers peg counts to central control (CC) 1 minute before the transfer of active registers to holding registers. The active count is normally zero. The active count increases before the system transfers active registers to holding registers.

The following table lists the key and info fields associated with OM group EIUETHER.

Key field	Info field
None	NCMNODE_INFO Value range: 0 to 750

Related functional groups

There are no functional groups associated with OM group EIUETHER.

Registers

The following table lists the registers associated with OM group EIUETHER and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group EIUETHER

Register name	Measures
EIURXBCA	EIU receive broadcasts
EIURXBYT	EIU receive bytes
EIURXDIS	EIU receive discards
EIURXERR	EIU receive error
EIURXPKT	EIU receive packet
EIURXUPP	EIU receive unknown protocol packets
EIUTXBCA	IU transmit broadcasts
EIUTXBYT	EIU transmit bytes
EIUTXDIS	EIU transmit discards
EIUTXERR	EIU transmit errors
EIUTXPKT	EIU transmit packets

EIURXBCA

Register type
Peg

Description
EIURXBCA counts fault-free broadcast packets that the Ethernet interface receives.

Associated registers
None

Extension registers
EIURXBC2

Associated logs
None

EIURXBYT

Register type
Peg

Description
EIURXBYT counts separate bytes that the Ethernet interface receives in broadcast packets or unicast packets.

Associated registers
None

Extension registers
EIURXBY2

Associated logs
None

EIURXDIS

Register type
Peg

Description
EIURXDIS counts the number of times the system reports packets discarded because of resource limitations. An example of a resource limitation is not enough buffer space in the EIU.

Associated registers
None

Extension registers
EIURXDI2

Associated logs
None

EIURXERR

Register type
Peg

Description
EIURXERR counts packets that the Ethernet interface receives. These packets contain a cyclic redundancy check error or a framing error.

Associated registers
None

Extension registers
EIURXER2

Associated logs
None

EIURXPKT

Register type
Peg

Description
EIURXPKT counts error-free unicast packets that the Ethernet interface receives.

Associated registers
None

Extension registers
EIURXPK2

Associated logs
None

EIURXUPP

Register type
Peg

Description
EIURXUPP counts discarded packets that the Ethernet interface receives. The system discards these packets because they contain protocol that is not known or not supported.

Associated registers
None

Extension registers
EIURXUP2

Associated logs
None

EIUTXBCA

Register type
Peg

Description
EIUTXBCA counts packets that are transmitted to a broadcast Ethernet address.

Associated registers
None

Extension registers
EIUTXBC2

Associated logs
None

EIUTXBYT

Register type
Peg

Description
EIUTXBYT counts separate fault-free bytes that the Ethernet interface transmits in broadcast or unicast packets.

Associated registers
None

Extension registers
EIUTXBY2

Associated logs
None

EIUTXDIS

Register type
Peg

Description
EIUTXDIS counts outbound packets that the system discards before transmission because of resource limitations. An example of a resource limitation is not enough buffer space in the EIU.

Associated registers
None

Extension registers
EIUTXDI2

Associated logs
None

EIUTXERR

Register type
Peg

Description
EIUTXERR counts outbound packets that are not transmitted for one of the following reasons:

- The threshold for number of retries has been exceeded.
- The carrier was lost during transmission.
- A late collision occurred during transmission.

Associated registers
None

Extension registers
EIUTXER2

Associated logs
None

EIUTXPKT

Register type
Peg

Description
EIUTXPKT counts fault-free packets that are transmitted to a unicast Ethernet address.

Associated registers
None

Extension registers
EIUTXPK2

Associated logs
None

EMERGENCY

Description

The Emergency OM group tracks performance counters for the Enhanced 911 service.

The following table lists the key and info fields associated with OM group EMERGENCY.

Key field	Info field
None	None

Related functional groups

The following functional groups are related to OM group EMERGENCY:

- Session Manager

Registers

The following table lists the registers associated with OM group EMERGENCY and what they measure. For a description of a register, click on the register name.

Registers for OM group EMERGENCY

Register name	Measures
osnImSent	on-site notification instant messages sent
callAttempt	emergency calls attempted
callFailure	emergency call failure
operatorCallbackAttempt	operator callbacks attempted
operatorCallbackConnected	operator callbacks connected
operatorConnectFailure	operator connection failures

osnImSent

Register type
Peg

Description
Tracks total number of times an on-site notification instant message has been sent.

Associated registers
None

Extension registers
None

Associated logs
None

callAttempt

Register type
Peg

Description
Tracks total number of times an emergency call has been attempted.

Associated registers
callFailure

Extension registers
None

Associated logs
None

callFailure

Register type
Peg

Description
Tracks total number of times an emergency call may have failed.

Associated registers
callAttempt

Extension registers
None

Associated logs
None

operatorCallbackAttempt

Register type
Peg

Description
This OM is pegged when the E911 emergency operator attempts to callback the originating (enterprise) caller. This OM is not pegged for residential operator callback attempts.

Associated registers
operatorCallbackConnected, operatorConnectFailure

Extension registers
None

Associated logs
None

operatorCallbackConnected

Register type
Peg

Description
This OM is pegged when the E911 emergency operator established voicepath with the originating (enterprise) caller. This OM is not generated for residential operator callbacks.

Associated registers
operatorCallbackAttempt, operatorConnectFailure

Extension registers
None

Associated logs
None

operatorConnectFailure

Register type
Peg

Description
This OM is pegged when a PSAP connect failure is detected while attempting to establish an emergency call. Connection failure scenarios include: no answer timeout, busy trunks or gateway unavailable.

Associated registers
operatorCallbackConnected, operatorCallbackAttempt

Extension registers
None

Associated logs
None

ENETMAT

Description

OM group Enhanced Network Matrix Card (ENETMAT) monitors the performance of enhanced network (ENET) matrix cards. Operational measurements for ENET matrix cards are divided into two sets:

- crosspoint (XPT) cards, like NT9X35
- link paddle boards (PB), like NT9X40 and NT9X41

ENETMAT contains 12 peg registers that count the following events:

- errors in ENET XPT cards
- faults in ENET XPT cards
- ENET partitioning that occurs because an ENET XPT card is system busy
- ENET partitioning that occurs because an ENET XPT card is manual busy
- peripheral modules (PM) that are isolated because an ENET XPT card is system busy
- PMs that are isolated because an ENET XPT card is manual busy
- errors in ENET link PBs
- faults in ENET link PBs
- ENET partitioning that occurs because an ENET link PB is system busy
- ENET partitioning that occurs because an ENET link PB is manual busy
- PMs that are isolated because an ENET link PB is system busy
- PMs that are isolated because an ENET link PB is manual busy

ENETMAT also contains 9 use registers that count the following events:

- an XPT card is system busy
- an XPT card is manual busy
- an XPT card is offline
- ENET partitioning occurred because an ENET XPT card is out of service
- a PM is isolated because an ENET XPT card is out of service

- a link PB is system busy
- a link PB is manual busy
- ENET partitioning occurs because an ENET link PB is out of service
- a PM is isolated because an ENET link PB is out of service

The following table lists the key and info fields associated with OM group ENETMAT.

Key field	Info field
None	None

Related functional groups

SuperNode offices that have ENET are associated with the OM group ENETMAT.

Registers

The following table lists the registers associated with OM group ENETMAT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ENETMAT (Sheet 1 of 2)

Register name	Measures
ENCDERR	XPT card errors
ENCDFLT	XPT card faults
ENCDISOU	XPT card isolation usage
ENCDPARU	XPT card partitioning usage
ENMBCDU	XPT card manual busy usage
ENMBPBU	Link PB manual busy usage
ENMCDISO	XPT card manual busy isolation
ENMCDPAR	XPT card manual busy partitioning
ENMPBISO	Link PB manual busy isolation
ENMPBPAR	Link PB manual busy partitioning

Registers for OM group ENETMAT (Sheet 2 of 2)

Register name	Measures
ENOFCDU	XPT card offline usage
ENPBERR	Link PB errors
ENPBFLT	Link PB faults
ENPBISOU	Link PB isolation usage
ENPBPARU	Link PB partitioning usage
ENSBCDU	Crosspoint card system busy usage
ENSBPBU	Link paddle board (PB) system busy usage
ENSCDISO	Crosspoint (XPT) card system busy isolation
ENSCDPAR	Crosspoint (XPT) card system busy partitioning
ENSPBISO	Link paddle board (PB) system busy isolation
ENSPBPAR	Link paddle board (PB) system busy partitioning

ENCDERR

Register type
Peg

Description
ENCDERR counts errors that the system detects in the operation of the in-service XPT cards of the network.

Associated registers
None

Extension registers
None

Associated logs
ENET208

ENCDFLT

Register type
Peg

Description
ENCDFLT counts the number of times the system identifies a hard fault in network XPT cards. The system identifies hard faults as a result of self tests. A detected error triggers self tests. The XPT card is set to a system busy status. This status remains until a manual action occurs or until the system initiates a successful recovery.

Associated registers
None

Extension registers
None

Associated logs
ENET203

ENCDISOU

Register type
Usage

Scan rate
100 seconds

Description
ENCDISOU records if the system isolates a PM because of out-of-service XPT cards. An isolated PM does cannot access the network. Isolation occurs if the last ENET XPT card that connects a PM to the rest of the network goes out of service. If the network goes out of service, the PM becomes central side (C-side) busy.

ENCDISOU increases by the number of C-side busy PMs connected to the network. Register ENCDISOU increases if the XPT card and the mate XPT card on the opposite plane are out of service.

Associated registers
None

Extension registers
None

Associated logs
None

ENCDPARU

Register type
Usage

Scan rate
100 seconds

Description
ENCDPARU records if a minimum of one out-of-service XPT card is present on plane 0. Register ENCDPARU also records if a minimum one out-of-service ENET component is present on plane 1.

This out-of-service XPT card and ENET component can partition the network and result in blocked calls. When the system partitions the network, register ENCDPARU increases by the total number of paths that are not accessible. These paths are from the P-side links of the out-of-service link XTP card to other P-side links in the network.

Associated registers
None

Extension registers
None

Associated logs
None

ENMBCDU

Register type
Usage

Scan rate
100 seconds

Description
ENMBCDU records if an XPT card is manual busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENMBPBU

Register type
Usage

Scan rate
100 seconds

Description
ENMBPBU records if a PB is manual busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENMCDISO

Register type
Peg

Description
ENMCDISO counts in-service ENET XPT cards that become manual busy. The manual busy state causes the isolation of a minimum of one PM.

An isolated PM cannot access the network. Isolation occurs if the last ENET XPT card that connects a PM to the rest of the network goes out of service. The PM becomes C-side busy.

Associated registers
None

Extension registers
None

Associated logs
ENET201

ENMCDPAR

Register type
Peg

Description
ENMCDPAR counts in-service ENET XPT cards that become manual busy. These cards become manual busy while other ENET components on the opposite plane are out of service. The count can partition the network. A partitioned network results in blocked calls. This condition must be present for a minimum of 100 seconds before the register increases. This condition must be present as a result of the scanning interval.

Associated registers
None

Extension registers
None

Associated logs
ENET201

ENMPBISO

Register type
Peg

Description
ENMPBISO counts in-service ENET link PBs that become manual busy. The manual busy state causes the isolation of a minimum of one PM.

An isolated PM cannot access the network. An ENET link PB card connects the PM to the rest of the network. If the last ENET link PB card goes out of service, PM isolation occurs. The PM becomes C-side busy.

Associated registers
None

Extension registers
None

Associated logs
ENET201

ENMPBPAR

Register type
Peg

Description
ENMPBPAR counts in-service ENET link PBs that become manual busy. These PBs become manual busy while other ENET components on the opposite plane are out of service. The manual busy state causes the blockage of calls from one PM to other PMs. As a result of the scanning interval, this condition must be present for a minimum of 100 seconds before the register increases.

Associated registers
None

Extension registers
None

Associated logs
ENET201

ENOFCDU

Register type
Usage

Scan rate
100 seconds

Description
ENOFCDU records if a card is offline.

Associated registers
None

Extension registers
None

Associated logs
None

ENPBERR

Register type
Peg

Description
ENPBERR counts all errors that the system detects in the operation of the in-service link PBs of the network.

Associated registers
None

Extension registers
None

Associated logs
ENET208

ENPBFLT

Register type
Peg

Description
ENPBFLT counts the number of times the system identifies a hard fault in the network link PB. Detected errors trigger self tests that result in hard faults. The link PB is set to system busy until a manual action occurs or until the system initiates a successful recovery.

Associated registers
None

Extension registers
None

Associated logs
ENET203

ENPBISOU

Register type
Usage

Scan rate
100 seconds

Description
ENPBISOU records if a PM isolates as a result of out-of-service PBs.

An isolated PM cannot access the network. Isolation occurs if the last ENET link PB that connects a PM to the rest of the network goes out of service. The PM becomes C-side busy.

ENPBISOU increases if a link PB and the mate link PB on the opposite plane are out of service. Register ENPBISOU increases by the total number of C-side busy PMs that the two link PBs connect to the network.

Associated registers
None

Extension registers
None

Associated logs
None

ENPBPARU

Register type
Usage

Scan rate
100 seconds

Description
ENPBPARU records if a minimum of one out-of-service link PB is present on plane 0. Register ENPBPARU also records if a minimum of one out-of-service ENET component is present on plane 1.

The out-of-service link PB and ENET component can partition the network and result in blocked calls. When the system partitions the network, register ENPBPARU increases. Register ENPBPARU increases by the total number of paths that are not accessible. These paths are from the P-side links of the out-of-service link PB to other P-side links in the network.

Associated registers
None

Extension registers
None

Associated logs
None

ENSBCDU

Register type
Usage

Scan rate
100 seconds

Description
ENSBCDU records if an ENET XPT card is system busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENSBPBU

Register type
Usage

Scan rate
100 seconds

Description
ENSBPBU records if an ENET link PB is system busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENSCDISO

Register type
Peg

Description
ENSCDISO counts in-service ENET XPT cards that become system busy. The system busy state causes the isolation of a minimum of one PM.

An isolated PM cannot access the network. Isolation occurs if the last ENET XPT card that connects a PM to the rest of the network goes out of service. The PM becomes C-side busy.

Associated registers
None

Extension registers
None

Associated logs
ENET203

ENSCDPAR

Register type
Peg

Description
ENSCDPAR counts in-service ENET XPT cards that become system busy. These cards become system busy when other ENET components on the opposite plane are out of service. This condition can partition the network. A partitioned network results in blocked calls. A 100-second interval must occur between these events for the register to increase.

Associated registers
None

Extension registers
None

Associated logs
ENET203

ENSPBISO

Register type
Peg

Description
ENSPBISO counts in-service ENET link PBs that become system busy. The system busy state causes the isolation a minimum of one PM.

An isolated PM cannot access the network. Isolation occurs if the last ENET link PB that connects a PM to the rest of the network goes out of service. The PM becomes C-side busy.

Associated registers
None

Extension registers
None

Associated logs
ENET203

ENSPBPAR

Register type
Peg

Description
ENSPBPAR counts in-service ENET link PBs that become system busy. The PBs become system busy when other ENET components on the opposite plane are out of service. The system busy state causes the blockage of calls from one PM to the other PMs. An interval of 100 seconds must occur between these events for the register to increase.

Associated registers
None

Extension registers
None

Associated logs
ENET203

ENETOCC

Description

OM group Enhanced Network (ENET) Occupancy (ENETOCC) provides information about the central processing unit (CPU) occupancy of an in-service ENET. ENETOCC provides information on each ENET in a DMS-100 family switch. Each ENET CPU sends occupancy information to the computing module (CM) every 60 seconds. The CM copies this information in to the OM registers.

ENETOCC registers record the use of the ENET CPU by:

- call processing-related processes
- scheduler-related processes
- system-related processes
- maintenance-related processes
- background-related processes
- idler class processes

The following table lists the key and info fields associated with OM group ENETOCC.

Key field	Info field
None	None

Related functional groups

SuperNode offices that have ENET are associated with the OM group ENETOCC.

Registers

The following table lists the registers associated with OM group ENETOCC and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ENETOCC (Sheet 1 of 2)

Register name	Measures
ENBKG	Background occupancy
ENCPOCC	Call processing occupancy

Registers for OM group ENETOCC (Sheet 2 of 2)

Register name	Measures
ENFORE	System occupancy
ENIDLE	Idler occupancy
ENMAINT	Maintenance occupancy
ENSCHED	Scheduler occupancy

ENBKG

Register type
Peg

Description
ENBKG records if the ENET CPU holds background-related processes. Examples of background-related processes are routine maintenance logs, service orders, OM accumulation and audits.

At the beginning of the transfer period, ENBKG is set to zero. The occupancy value for the ENET CPU background transfers from the ENET node to the CM node every 60 seconds. The OM system samples the background occupancy value stored on the CM every 100 seconds. The 100 seconds is the slow sample period. The OM system accumulates the samples over the transfer period.

To obtain the percentage of ENET CPU occupancy attributed to background-related processes, perform the following calculation. Divide the ENBKG register value by the number of slow samples from the transfer period.

If a sample dump of OM group ENETOCC have the following values:

```
CLASS:ACTIVE START:1996/04/24 17:30:00WED; STOP:1996/04/24 17:33:01WED;
SLOWSAMPLES: 2 ; FASTSAMPLES: 18 ;
INFO (ENETOCC_PLANE_SHELF)
  ENCPOCC ENSCHED ENFORE ENMAINT ENBKG ENIDLE
  0          0          0

      2          20        12          58        2       106
```

then the percentage of ENET CPU (on plane 0 shelf 0) occupancy attributed to background-related processes for the transfer period is (2/2) = 1%

Associated registers
None

Extension registers
None

Associated logs
None

ENCPOCC

Register type
Peg

Description
ENCPOCC records if the ENET CPU holds call processing-related processes.

At the beginning of the transfer period, register ENCPOCC is set to zero. The CPU call processing occupancy value for the ENET transfers from the ENET node to the CM node every 60 seconds. The OM system samples the call processing occupancy value stored on the CM every 100 seconds. One hundred seconds is the slow sample period. The OM system accumulates the samples over the transfer period.

To obtain the percentage of ENET CPU occupancy attributed to call processing-related processes, perform the following calculation. Divide the ENCPOCC register value by the number of slow samples from the transfer period.

If a sample dump of OM group ENETOCC have the following values:

```
CLASS:ACTIVE START:1996/04/24 17:30:00WED; STOP:1996/04/24 17:33:01WED;
SLOWSAMPLES: 2 ; FASTSAMPLES: 18 ;
INFO (ENETOCC_PLANE_SHELF)
    ENCPOCC ENSCHED ENFORE ENMAINT ENBKG ENIDLE
 0          0          0

       2         20         12         58         2    106
```

then the percentage of ENET CPU (on plane 0 shelf 0) occupancy attributed to background-related processes for the transfer period is (2/2) = 1%

Associated registers
None

Extension registers
None

Associated logs
None

ENFORE

Register type
Peg

Description
ENFORE records system-related processes occupy the ENET CPU. Examples of system-related processes are sanity checking, or system-critical work that requires immediate response.

At the beginning of the transfer period, register ENFORE is set to zero. The system occupancy for the ENET CPU transfers from the ENET node to the CM node every 60 seconds. The OM system samples the system occupancy value stored on the CM every 100 seconds. The slow sample period is 100 seconds. The OM system accumulates the samples over the transfer period.

To obtain the percentage of ENET CPU occupancy attributed to system-related processes perform the following calculation. Divide the ENFORE register value by the number of slow samples from the transfer period.

If a sample dump of OM group ENETOCC appears as follows:

```
CLASS:ACTIVE START:1996/04/24 17:30:00WED; STOP:1996/04/24 17:33:01WED;
SLOWSAMPLES: 2 ; FASTSAMPLES: 18 ;
INFO (ENETOCC_PLANE_SHELF)
  ENCPOCC ENSCHED  ENFORE ENMAINT ENBKG ENIDLE
  0          0          0

      2          20         12         58         2       106
```

then the percentage of ENET CPU (on plane 0 shelf 0) occupancy attributed to system-related processes for the transfer period is (12/2) = 6%.

Associated registers
None

Extension registers
None

Associated logs
None

ENIDLE

Register type
Peg

Description
ENIDLE records if the ENET CPU performs idler class processes. These processes run when other processes do not run.

At the beginning of the transfer period, the system sets the ENIDLE to zero. The system transfers the ENET CPU idler occupancy value from the ENET node to the CM node every 60 seconds. The OM system samples idler occupancy value stored on the CM every 100 seconds. The slow sample period is 100 seconds. The OM system accumulates the samples over the transfer period.

To obtain the percentage of ENET CPU occupancy attributed to idler-related processes, perform the following calculation. Divide the ENIDLE register value by the number of slow samples from the transfer period.

If a sample dump of OM group ENETOCC appears as follows:

```
CLASS:ACTIVE START:1996/04/24 17:30:00WED; STOP:1996/04/24 17:33:01WED;
SLOWSAMPLES: 2 ; FASTSAMPLES: 18 ;
INFO (ENETOCC_PLANE_SHELF)
      ENCPOCC ENSCHED ENFORE ENMAINT ENBKG ENIDLE
  0             0          0

          2          20          12        58          2       106
```

then the percentage of ENET CPU occupancy related to idler-related processes for the transfer period is (106/2) = 53%. The ENET CPU for this example is on plane 0, shelf 0.

Associated registers
None

Extension registers
None

Associated logs
None

ENMAINT

Register type
Peg

Description
ENMAINT records if the ENET CPU performs maintenance-related processes.

At the beginning of the transfer period, the system sets the ENMAINT to zero. The system transfers ENET CPU maintenance occupancy value from the ENET node to the CM node every 60 seconds. The OM system samples maintenance occupancy value stored on the CM every 100 seconds. The slow sample period is 100 seconds. The OM system accumulates samples over the transfer period.

To obtain the percentage of ENET CPU occupancy attributed to maintenance-related processes. perform the following calculation. Divide the ENMAINT register value by the number of slow samples from the transfer period.

If a sample dump of OM group ENETOCC appears as follows:

```
CLASS:ACTIVE START:1996/04/24 17:30:00WED; STOP:1996/04/24 17:33:01WED;
SLOWSAMPLES: 2 ; FASTSAMPLES: 18 ;
INFO (ENETOCC_PLANE_SHELF)
    ENCPOCC ENSCHED ENFORE ENMAINT ENBKG ENIDLE
 0          0          0

          2         20         12         58         2        106
```

then the percentage of ENET CPU occupancy related to maintenance-related processes for the transfer period is (58/2) = 29%. The ENET CPU for this example is on plane 0, shelf 0.

Associated registers
None

Extension registers
None

Associated logs
None

ENSCHED

Register type
Peg

Description
ENSCHED records if the ENET CPU performs scheduler-related processes.

At the beginning of the transfer period, the system sets ENSCHED to zero. The system transfers ENET CPU scheduler occupancy value from the ENET node to the CM node every 60 seconds. The OM system samples scheduler occupancy value stored on the CM every 100 seconds and accumulates the samples over the transfer period.

To obtain the percentage of ENET CPU occupancy related to scheduler-related processes, perform the following calculation. Divide the ENSCHED register value by the number of slow samples from the transfer period.

If a sample dump of OM group ENETOCC appears as follows:

```
CLASS:ACTIVE START:1996/04/24 17:30:00WED; STOP:1996/04/24 17:33:01WED;
SLOWSAMPLES: 2 ; FASTSAMPLES: 18 ;
INFO (ENETOCC_PLANE_SHELF)
     ENCPOCC ENSCHED ENFORE ENMAINT ENBKG ENIDLE
  0          0          0

        2          20         12         58         2       106
```

then the percentage of ENET CPU occupancy related to scheduler-related processes for the transfer period is (20/2) = 10%. The ENET CPU for this example is on plane 0, shelf 0.

Associated registers
None

Extension registers
None

Associated logs
None

ENETPLNK

Description

OM group Enhanced Network (ENET) Peripheral-side (P-side) links (ENETPLNK) is part of all SuperNode offices with ENET. ENETPLNK monitors the performance of the ENET P-side links.

The following table lists the key and info fields associated with OM group ENETPLNK.

Key field	Info field
None	None

Related functional groups

The functional group SuperNode offices equipped with ENET is associated with ENETPLNK.

Registers

The following table lists the registers associated with OM group ENETPLNK and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ENETPLNK (Sheet 1 of 2)

Register name	Measures
ENLKERR	P-side link errors
ENLKFLT	P-side link faults
ENLKISOU	P-side link isolation
ENLKPARU	P-side link partitioning use
ENMBLKU	P-side link system manual busy use
ENMLKISO	P-side link manual busy isolation
ENMLKPAR	P-side link manual busy partitioning
ENSBLKU	P-side link system busy use
ENSLKISO	P-side link system busy isolation

Registers for OM group ENETPLNK (Sheet 2 of 2)

Register name	Measures
ENSLKPAR	P-side link system busy partitioning
ENSPCHER	P-side link speech errors

ENLKERR

Register type
Peg

Description
ENLKERR counts errors that the system detects on in-service links between the networks and peripheral modules (PM).

Associated registers
None

Extension registers
None

Associated logs
ENET308

ENLKFLT

Register type
Peg

Description
ENLKFLT counts the number of times the system cannot recover a P-side link between the ENET and a PM. The recovery attempt occurs following detection of an error. The link is system busy until manual action is taken or a successful system-initiated recovery attempt occurs.

Associated registers
None

Extension registers
None

Associated logs
ENET303

ENLKISOU

Register type
Usage

Scan rate
100 seconds

Description
ENLKISOU records if the system isolated a PM because of an out-of-service link (This occurs when the last ENET P-side link that connects a PM to the rest of the network goes out of service.). An isolated PM does not have access to the network, and becomes central-side (C-side) busy. A P-side link and the mate P-side link on the opposite plane are out of service. ENLKISOU increases by the number of C-side busy PMs that the P-side links connect to the network. This condition must continue for 100 seconds before the register increases.

Associated registers
None

Extension registers
None

Associated logs
None

ENLKPARU

Register type
Usage

Scan rate
100 seconds

Description
ENLKPARU records when:

- a minimum of one out-of-service ENET P-side link is present on plane 0
- a minimum of one out-of-service ENET component is present on plane 1

These conditions can partition the network. When partitioning occurs, ENLKPARU increases by number of paths the system cannot access from out-of-service P-side links.

Associated registers
None

Extension registers
None

Associated logs
None

ENMBLKU

Register type
Usage

Scan rate
100 seconds

Description
ENMBLKU records if a link is manual busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENMLKISO

Register type
Peg

Description
ENMLKISO counts in-service ENET P-side links that become manual busy (ManB) and cause isolation of a minimum of one PM. An isolated PM does not access the networks. Isolation occurs when the last ENET P-side link that connects the PM to the rest of the network goes out of service. The PM becomes C-side busy.

Associated registers
None

Extension registers
None

Associated logs
ENET301

ENMLKPAR

Register type
Usage

Scan rate
100 seconds

Description
ENMLKPAR records when in-service ENET P-side links become ManB while links on the opposite plane are out of service. This condition blocks calls between PMs, and must continue for 100 seconds before ENMLKPAR increases.

Associated registers
None

Extension registers
None

Associated logs
ENET301

ENSBLKU

Register type
Usage

Scan rate
100 seconds

Description
ENSBLKU records if a link is system busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENSLKISO

Register type
Peg

Description
ENSLKISO counts in-service ENET P-side links that become system busy and cause isolation of a minimum of one PM. An isolated PM does not have access to the network. Isolation occurs if the last ENET P-side link that connects a PM to the network goes out of service. The PM becomes C-side busy.

Associated registers
None

Extension registers
None

Associated logs
ENET301

ENSLKPAR

Register type
Peg

Description
ENSLKPAR counts when in-service ENET P-side links become system busy (SysB). The links be come SysB while P-side links on the opposite plane are out of service. This condition blocks calls between PMs, and must continue for 100 seconds before the register increases.

Associated registers
None

Extension registers
None

Associated logs
ENE303

ENSPCHER

Register type
Peg

Description
ENSPCHER counts all errors detected on speech connections through the network. The value in ENSPCHER equals the number of integrity failure reports received from PM controllers. The following conditions can cause an integrity failure:

- a failure of the PM at the other end of the connection
- a failure on a link between a PM and the network

Associated registers
None

Extension registers
None

Associated logs
ENCP100, ENCP101, ENCP102

ENETSYS

Description

All SuperNode offices with enhanced network (ENET) have OM group Enhanced Network System card (ENETSYS). ENETSYS monitors the performance of the following ENET system cards:

- NT9X10 - Processor card
- NT9X26 - Remote terminal interface paddle board
- NT9X36 - Network clock and message controller card
- NT9X40 - Quad DS-512 fiber interface paddle board
- NT9X30 - +5 V power converter
- NT9X31 - -5 V power converter

The following table lists the key and info fields associated with OM group ENETSYS.

Key field	Info field
None	None

Related functional groups

SuperNode offices that have ENET are associated with OM group ENETSYS.

Registers

The following table lists the registers associated with OM group ENETSYS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ENETSYS (Sheet 1 of 2)

Register name	Measures
ENCALDND	Calls denied
ENCOLD	Cold restarts
ENERR	System card errors
ENFLT	System card faults
ENISOU	System card isolation usage

Registers for OM group ENETSYS (Sheet 2 of 2)

Register name	Measures
ENMBU	System card manual busy usage
ENMISOP	Manual busy isolation with system cards
ENMPARP	System card manual busy partitioning
ENPARU	Partitioning use with system cards
ENPARUHI	ENET partitioning usage register high
ENPARULO	ENET partitioning use register low
ENRELOAD	Reload restarts
ENSBU	System card system busy usage
ENPSISOP	System busy isolation
ENSPARP	System busy partitioning
ENSWERRS	Enhanced network (ENET) software error (SWERRS)
ENTRAPS	Enhanced network (ENET) traps
ENWARM	Warm restarts

ENCALDND

Register type
Peg

Description
ENCALDND counts calls that the system denies because ENET components in both planes are OOS (offline or system, manual or central-side (C-side) busy).

Associated registers
None

Extension registers
None

Associated logs
ENCP136

ENCOLD

Register type
Peg

Description
ENCOLD counts cold restarts that occur in the ENET CPU operation.

Associated registers
None

Extension registers
None

Associated logs
ENET103

ENERR

Register type
Peg

Description
ENERR counts errors that the system detects in ENET system card operation. The system detects errors

- through problem reports from the ENET local processor
- as a result of routine or initializing audits
- through an ENET shelf failure to respond to the computing module

Associated registers
None

Extension registers
None

Associated logs
ENET108

ENFLT

Register type
Peg

Description
ENFLT counts the number of times an ENET system card cannot recover from an error. The ENET is system busy until manual action is taken or a successful system recovery occurs.

Associated registers
None

Extension registers
None

Associated logs
ENET103

ENISOU

Register type
Usage

Scan rate
100 seconds

Description
ENISOU records peripheral modules (PM) because of OSS ENET system cards. An isolated PM does not have access to the network. Isolation occurs if the last ENET system card that connects a PM to the rest of the network becomes OOS. The PM becomes C-side busy.

If a system card and its mate on the opposite plane are OOS, ENISOU increases. ENISOU increases by the number of C-side busy PMs that the system cards connect to the network.

Associated registers
None

Extension registers
None

Associated logs
None

ENMBU

Register type
Usage

Scan rate
100 seconds

Description
ENMBU records ENET system cards that are manual busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENMISOP

Register type
Peg

Description
ENMISOP counts in-service ENET system cards that become manual busy and cause isolation of a minimum of one PM. An isolated PM does not have access to the network. Isolation occurs if the last ENET system card that connects a PM to the network goes out of service. The PM becomes C-side busy.

Associated registers
None

Extension registers
None

Associated logs
ENET101

ENMPARP

Register type
Peg

Description
ENMPARP counts in-service ENET system cards that become manual busy when a system card on opposite plane is OOS. This condition can partition the network and block calls. A 100-second interval must occur between these events for this register ENMPARP to increase.

Associated registers
None

Extension registers
None

Associated logs
ENET101

ENPARU

Register type
Usage

Scan rate
100 seconds

Description
ENPARU records when an OOS ENET system card exists on plane zero. ENPARU also records if an OOS ENET component exists on plane 1. A 100-second interval must occur between the following events for this register to increase:

- a minimum of one out-of-service link is present on plane 0
- a minimum of one out-of-service ENET component is present on plane 1

When the condition partitions the network, ENPARU increases by the number of paths the system cannot access. These parts are from the P-side links off the OOS ENET system card to other P-side links.

Associated registers
None

Extension registers
None

Associated logs
None

ENPARUHI

Register type
Usage

Scan rate
100 seconds

Description
ENPARUHI works with register ENPARULO to show how many paths are not available for call processing because of OOS hardware components in either plane. ENPARUHI increases when ENPARULO exceeds 65535.

Total partitioning = (ENPARUHI x 65535) + ENPARULO

ENPARUHI and ENPARULO replace usage registers ENPARU, ENETMAT_ENCDPARU, ENETMAT_ENPBPARU, and ENETPLNK_ENLKPARU. The old registers were plane-dependent and did not give a clear view of the whole network.

Associated registers
ENPARULO

Extension registers
None

Associated logs
None

ENPARULO

Register type
Usage

Scan rate
100 seconds

Description
ENPARULO works with register ENPARUHI to reflect the number of paths not available for call processing because of OOS hardware components in either plane. After ENPARULO exceeds 65535, it is reset and ENPARUHI increases by one.

Total partitioning = (ENPARUHI x 65535) + ENPARULO

Registers ENPARULO and ENPARUHI replace usage registers ENPARU, ENETMAT_ENCDPARU, ENETMAT_ENPBPARU, and ENETPLNK_ENLKPARU. The old registers were plane-dependent and did not give a clear view of the whole network.

Associated registers
ENPARUHI

Extension registers
None

Associated logs
None

ENRELOAD

Register type
Peg

Description
ENRELOAD counts reload restarts that occur in ENET CPU operation.

Associated registers
None

Extension registers
None

Associated logs
ENET103

ENSBU

Register type
Usage

Scan rate
100 seconds

Description
ENSBU records when an ENET system card is system busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENPSISOP

Register type
Peg

Description
ENSISOP counts in-service ENET system cards that become system busy and cause isolation of a PM. An isolated PM does not have access to the network. Isolation occurs if the last ENET system card connecting a PM to the network becomes OOS. The PM becomes C-side busy.

Associated registers
None

Extension registers
None

Associated logs
None

ENSPARP

Register type
Peg

Description
ENSPARP counts when an in-service ENET system card becomes system busy while an ENET component on opposite plane is OOS. A 100-second interval must occur between these events for the register to increase. This condition can partition the network and block calls.

Associated registers
None

Extension registers
None

Associated logs
ENET103

ENSWERRS

Register type
Peg

Description
ENSWERRS counts SWERRS in ENET system card operation.

Associated registers
None

Extension registers
None

Associated logs
SWERSS

ENTRAPS

Register type
Peg

Description
ENTRAPS counts traps in ENET system card operation.

Associated registers
None

Extension registers
None

Associated logs
TRAP

ENWARM

Register type
Peg

Description
ENWARM is not active.

Associated registers
None

Extension registers
None

Associated logs
None

ENG640M1

Description

OM group Engineering 640 Measurements 1 (ENG640M1) provides information about line use, counts originations, and counts terminations on selected subscriber lines or line groups.

Table ENG640I1 specifies the monitored lines. The table contains a maximum of 640 entries. To add the subscriber line usage (SLU) option to a line, use SERVORD. The SLUADD command adds the line to table ENG640I1. Following the SLU_INSTALL command, the system copies the contents of table ENG640I1 into group ENG640M1.

Table ENG640I1 can accept new entries while group ENG640M1 monitors the lines that the table specified. The new entries do not affect the group before the SLU_INSTALL command.

The following table lists the key and info fields associated with OM group ENG640M1.

Key field	Info field
None	SLU_OM_INFO

There are from 1 to 640 tuples, depending on the number of lines under study.

To activate the SLU feature, set parameter OPTIONAL_SLU_FEATURE in table OFCOPT to Y (yes). The SLU feature works in tables LENFEAT, IBNFEAT, and KSETFEAT.

Related functional groups

The Meridian SL-100 PBX functional group is associated with OM group ENG640M1.

Registers

The following table lists the registers associated with OM group ENG640M1 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ENG640M1

Register name	Measures
TBU0	Traffic busy use
ORIG0	Originations
TERM0	Terminations
Busy0	Call Processing Busy - termination attempt failed

TBU0

Register type
Usage

Scan rate
100 seconds

Description
TBU0 records when a line processes calls. ENG640M1_SCAN_RATE in table OFCVAR specifies the scan rate.

Associated registers
None

Extension registers
None

Associated logs
None

ORIG0

Register type
Peg

Description
ORIGO increases when a subscriber with subscriber line usage (SLU) option attempts to originate a call and dial tone connects. If the switch can identify which party of two- and four-party lines tries to call, the register increases one time. If the switch cannot identify the party, the register counts each directory number on the line.

Associated registers
None

Extension registers
None

Associated logs
None

TERM0

Register type
Peg

Description
TERM0 increases when a call terminates to a line with subscriber line usage (SLU) option and a ringing tone begins. TERM0 does not count calls in the same hunt group or the same equivalent group.

Associated registers
HUNT_HUNTATT, HUNT_HUNTOVFL

Validation formula
For a hunt group with the SLU option associated with all the lines:
HUNT_HUNTATT - HUNT_HUNTOVFL = TERM0

Extension registers
None

Associated logs
None

Busy0

Register type
Peg

Description
BUSY0 measures the number of calls that the system cannot terminate to a line because the line is CPB. For lines that are part of a hunt group, register BUSY0 measures only the last member of the hunt group.

Associated registers
None

Extension registers
None

Associated logs
None

ESP

Description

OM group Essential Service Protection (ESP) counts calls on essential service lines and failures to process essential line calls because of resource shortages.

ESP guarantees preferred service to essential lines. The system treats originations from essential lines before all other calls. Calls on essential lines require call condense blocks (CCB in table OFCENG). If CCBs are not available, the call uses the CCB for an origination that is not essential. If all CCBs are in use for essential originations, the call receives delayed service.

The following table lists the key and info fields associated with OM group ESP.

Key field	Info field
None	None

Related functional groups

The Essential Service Protection functional group is associated with OM group ESP.

Registers

The following table lists the registers associated with OM group ESP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ESP (Sheet 1 of 2)

Register name	Measures
ESPDELAY	Essential service protection delay
ESPORIG	Essential service protection originations
ESPOVRD	Essential service protection override
ESPPMBLK	Essential service protection peripheral module blocked calls
ESPPMCCO	Essential services protection calls forwarded from peripheral module to central controller

Registers for OM group ESP (Sheet 2 of 2)

Register name	Measures
ESPPMORG	Essential service protection peripheral module originations
ESPPMSTL	Essential service protection peripheral module steal

ESPDELAY

Register type
Peg

Description
ESPDELAY increases when an essential line receives delayed origination because CCBs are not available. All CCBs are in use on essential line originations. This register indicates not enough CCBs in table OFCENG.

Associated registers
CP_CCBOVFL, which counts messages that the system loses because CCBs are not available

Extension registers
None

Associated logs
None

ESPORIG

Register type
Peg

Description
ESPORIG counts originations from essential lines.

Associated registers
None

Extension registers
None

Associated logs
None

ESPOVRD

Register type
Peg

Description
ESPOVRD increases when an essential line origination takes the CCB of an origination that is not essential.

Associated registers
None

Extension registers
None

Associated logs
None

ESPPMBLK

Register type
Peg

Description
ESPPMBLK increases when an extended peripheral module (XPM) cannot give priority service to an essential line origination. This condition occurs because resources are not available.

Associated registers
ESPPMORG

Extension registers
None

Associated logs
None

ESPPMCCO

Register type
Peg

Description
ESPPMCCO counts essential line originations that the system forwards from an extended peripheral module (XPM) to the central controller (CC).

Associated registers
ESPPMORG

Extension registers
None

Associated logs
None

ESPPMORG

Register type
Peg

Description
ESPPMORG counts originations for an essential line that arrive at an extended peripheral module (XPM). The XPM attempts to give the line priority service.

Associated registers
ESPPMSTL, ESPPMBLK, ESPPMCCO

Extension registers
None

Associated logs
None

ESPPMSTL

Register type
Peg

Description
ESPPMSTL increases when an extended peripheral module (XPM) seizes a line that is not essential for an essential origination.

Associated registers
ESPPMORG

Extension registers
None

Associated logs
None

ESUP

Description

OM group Digital Echo Suppressor (ESUP) provides information on digital echo suppressor (DES) circuits. Each DES card contains eight circuits that provide echo suppression for eight separate channels. The DES circuits monitor the levels of digital speech signals on the transmit and receive paths between connected trunk circuits. DES circuits automatically apply attenuation when necessary, to reduce echo effects on long-distance trunk circuits.

ESUP registers count requests for a DES and record when DES circuits are in maintenance states.

The OM group ESUP data helps to assess the performance of DES cards, and to make sure that the configuration meets traffic requirements.

The following table lists the key and info fields associated with OM group ESUP.

Key field	Info field
CP_SELECTOR is the external identifier ESUP.	DES_OM_INFO is the number of DES circuits that the software defines.

Related functional groups

The following functional groups are associated with OM group ESUP:

- DMS-100 Local
- DMS-100/200 Local/Toll
- DMS-200 Toll
- DMS-250 Toll/Tandem
- DMS-300 Gateway
- DMS International
- DMS-MTX

Registers

The following table lists the registers associated with OM group ESUP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group ESUP

Register name	Measures
DESMBU	Digital echo suppressor manual busy use
DESOVFL	Digital echo suppressor overflow
DESSBU	Digital echo suppressor system busy use
DESSZRS	Digital echo suppressor seizure
DESTRU	Digital echo suppressor trunk use

DESMBU

Register type
Usage

Scan rate
10 seconds

Description
DESMBU records when digital echo suppressor circuits are manual busy or seized.

Associated registers
None

Extension registers
None

Associated logs
None

DESOVFL

Register type
Peg

Description
DESOVFL increases when a request for a digital echo suppressor (DES) fails because idle circuits are not available. When a request for a DES fails, the system routes the call to the next trunk group in the routing list. The system searches for a route that does not require a DES.

Associated registers
None

Extension registers
None

Associated logs
ATB100

DESSBU

Register type
Usage

Scan rate
10 seconds

Description
DESSBU records when digital echo suppressor circuits are in the following states:

- system busy
- peripheral module busy
- carrier fail
- deloaded

Associated registers
None

Extension registers
None

Associated logs
PM105, PM109, PM182, TRK106, TRK109

DESSZRS

Register type
Peg

Description
DESSZRS increases when a request for a digital echo suppressor (DES) is successful and a DES circuit handles a call. The register increases before the network connects the DES circuit and the trunks.

Associated registers
None

Extension registers
None

Associated logs
None

DESTRU

Register type
Usage

Scan rate
10 seconds

Description
DESTRU records when digital echo suppressor circuits are in the following states:

- call processing busy
- call processing busy deload
- initialize
- lockout

Associated registers
None

Extension registers
None

Associated logs
None

EXNDINV

Description

OM group External Node Inventory (EXNDINV) provides information about the availability and performance of external nodes. EXNDINV also provides information about maintenance level activity on nodes entered in table EXNDINV. The group adds the external node type OSNM to the range of correct keys.

The system transmits messages between the Digital Multiplex System (DMS) switch application and a remote service peripheral module (SPM). The advanced services protocol (ASP) allows this transmission. EXNDINV counts messages and failures to deliver messages because of problems with the remote node, hardware, or the ASP. Two usage registers record how long the external node is system busy or manual busy.

The following table lists the key and info fields associated with OM group EXNDINV.

Key field	Info field
TENNAME_TYPE (12-character string) (This key is the ENPMTYPE field of table EXDINV).	EXNDINV_OMINFO (TENPM_TYPE [external nodename], TENNODENO [external node number])

Related functional groups

The following functional groups are associated with OM group EXNDINV:

- Intelligent Services Node (ISN)
- LAN-supported external nodes
- Nodes entered in table EXNDINV

Registers

The following table lists the registers associated with OM group EXNDINV and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group EXNDINV

Register name	Measures
DLMER	Datalink manager errors
DLMRX	Datalink manager received
DLMSW	Datalink manager switched
DLMTX	Datalink manager transmit
INSMANB	In service to manual busy
INSSYSB	In service to system busy
LK1FAIL	Link one fail
MANBUSE	Manual busy usage
PROTVIOL	Protocol violation
RTSFAIL	Return-to-service failure
SYSBUSE	System busy usage
TSTFAIL	Test failures

DLMER

Register type
Peg

Description
DLMER counts failed attempts to send a message to the SPM. This count includes output messages the datalink manager cannot deliver to the SPM because of remote, protocol, or hardware problems.

Note: The OSSAIN does not support this register.

Associated registers
DLMTX

Validation formula
DLMER < = DLMTX

Extension registers
None

Associated logs
None

DLMRX

Register type
Peg

Description
DLMRX counts the number of times the datalink manager receives an input message from the SPM. This event occurs when a call goes to a remote external node.

Note: The OSSAIN does not support this register.

Associated registers
None

Extension registers
None

Associated logs
None

DLMSW

Register type
Peg

Description
DLMSW counts each time the SPM sends a message across an alternate link. When the system tries multiple links, the register increases once for each message sent. The SPM must send a message across an alternate link when:

- a hardware failure occurs.
- an Ethernet interface unit (EIU) normally used for this data transmission is busy because several calls are in progress and the system must route some output messages over different links.

Note: The OSSAIN does not support this register.

Associated registers
DLMTX

Validation formula
DLMSW < = DLMTX

Extension registers
None

Associated logs
None

DLMTX

Register type
Peg

Description
DLMTX counts each time the datalink manager tries to send an output message to an SPM. A call to a remote external node increases this register.

Note: The OSSAIN does not support this register.

Associated registers
DLMSW

Validation formula
DLMTX > = DLMSW

DLMTX > = DLMER

Extension registers
None

Associated logs
None

INSMANB

Register type
Peg

Description
INSMANB counts each time an external node changes state from the in-service to manual-busy. This event occurs when the BSY command is entered at the MAP terminal.

Associated registers
MANBUSE

Validation formula
If MANBUSE > 0, INSMANB > 0.

Extension registers
None

Associated logs
PM105

INSSYSB

Register type
Peg

Description
INSSYSB counts each time an external node changes state from in-service to system-busy.

Associated registers
SYSBUSE

Validation formula
If SYSBUSE > 0, then INSSYSB > 0.

Extension registers
None

Associated logs
PM102

LK1FAIL

Register type
Peg

Description
LK1FAIL counts each time an external node fails the internet control message protocol (ICMP) echo message test on one of the two links.

Note: The OSSAIN does not support this register.

Associated registers
None

Extension registers
None

Associated logs
PM128

MANBUSE

Register type
Peg

Description
MANBUSE records the amount of time an external node is manual-busy every 100 seconds.

Associated registers
INSMANB

Validation formula
If INSMANB > 0, MANBUSE must be > 0. An exception occurs when the device becomes manual busy less than 100 seconds before the transfer from holding register to active register.

Extension registers
None

Associated logs
None

PROTVIOL

Register type
Peg

Description
PROTVIOL counts each time advanced services protocol (ASP) or an application that uses ASP detects a high-level protocol violation.

Note: The OSSAIN does not support this register.

Associated registers
None

Extension registers
None

Associated logs
ASP100, ASP101

RTSFAIL

Register type
Peg

Description
RTSFAIL counts each time an external node fails to return to service after a manual request or switch maintenance actions.

Associated registers
None

Extension registers
None

Associated logs
PM181, PM100

SYSBUSE

Register type
Peg

Description
SYSBUSE records the amount of time an external node is system-busy every 100 seconds.

Associated registers
INSSYSB

Validation formula
If INSSYSB is > 0, SYSBUSE must be > 0. An exception occurs if the device becomes system busy less than 100 seconds before transfer from holding register to active register.

Extension registers
None

Associated logs
None

TSTFAIL

Register type
Peg

Description
TSTFAIL counts each time the system does not receive the audit echo response from the SPM. Register TSTFAIL counts these reception failures when you issue the TST command at the MAP.

Associated registers
None

Extension registers
None

Associated logs
PM181

EXT

Description

OM group Extension Block OM (EXT) monitors the use of extension blocks, which provide additional storage for data associated with a call. Extension blocks are auxiliary software resources allocated to calls for:

- special billing records
- data extensions for operator services
- custom calling features

EXT data indicates the most used extension blocks and availability of given types of extension blocks. The USNBD feature uses the 126 FBSEXT entry to monitor the use of extension blocks.

The following table lists the key and info fields associated with OM group EXT.

Key field	Info field
EXT_FORMAT_CODE The EXT_FORMAT_CODE entries appear in the following table.	EXTINFO indicates the number of available blocks.

The following table lists the office parameters for key field EXT_FORMAT_CODE.

EXT_FORMAT_CODE entries (Sheet 1 of 8)

Index	EXT_FORMAT_CODE	Office parameter name
1	AOSS_RU	AOSS_NUM_RECORDING_UNITS
2	REGN_CP_SEMA_EXT	
3	PERM	NUMPERMEXT
4	CCIS_INWATS_BLOCK	NUM_OF_CCIS_INWATS_BLOCKS
5	NT_RECORDING_UNIT	NUM_OF_NT_RECORDING_UNITS
6	TOPSRU	TOPS_NUM_RU
7	FEATURE_EXT_FC	NO_OFTWC_EXT_BLOCKS

EXT_FORMAT_CODE entries (Sheet 2 of 8)

Index	EXT_FORMAT_CODE	Office parameter name
8	MTX_HANDOFF_BLOCK	HANDOFF_BLOCK_COUNT
9	CFW_EXTENSION	CFW_EXT_BLOCKS
10	CSDDSPERM	NUMCSDDSPERMEXT
11	ROTL_PRIMING_BLOCK	ROTL_TIME_IN_20MIN
12	CUSTOM_CALLING_DATA	NO_OF_SC_EXT_BLKS
13	CAMATOPS_RU	TOPS_NUM_CAMA_RU
14	IBNCQEXT	NUMIBNCQEXTBLK
15	IBN_INTL_XLA_EXT_BLOCK	NUM_IBN_IXLA_EXT_BLOCKS
16	SMDR_RECORDING_UNIT	NO_OF_SMDR_REC_UNITS
17	ALTADDR_EXT_FC	Fixed at 64
18	ASO_RECORD_UNIT	Fixed at 128
19	CFD_EXTENSION	CFD_EXT_BLOCKS
20	VDSA_RECORD_UNIT	DSA_RU_CNT
21	AVCDRU_RECORD_UNIT	AVCDR_RU_COUNT
22	FEATURE_CONTROL_DATA	NO_OF_FTR_CONTROL_BLKS
23	MCDR_RECORD_UNIT	NO_OF MCDR_REC_UNITS
24	WIDEBAND_EXT_BLOCK	WIDEBAND_EXT_BLOCK
25	SDPATC_EXTENSION	NUMSDPATCEXTBLK
26	MCI_POPS_REC_UNIT	NO_OF_POPS_REC_UNITS
27	LCO_EXTENSION_BLOCK	NO_LOCAL_COIN_EXT_BLKS
28	CDR300_EXTND_RECORDING_UNIT	CDR300_EXTND_RECORDING_UNIT
29	NSG_RECORDING_UNIT	NO_OF_CDR_REC_UNITS
30	CDR300_RECORDING_UNIT	NUMBER_OF_CDR_UNITS

EXT_FORMAT_CODE entries (Sheet 3 of 8)

Index	EXT_FORMAT_CODE	Office parameter name
31	OESD_RECORD_UNIT	Reserved for OESD office
32	NCS_EXTENSION_BLK	NUM_NCS_EXT_BLK
33	LTD_EXT_DATA	Fixed at 20
34	KEY_SHORT_HUNT_EXT	KSHUNT_EXT_BLOCKS
35	NSC_EXT_BLK	UM_OF_NSC_EXT_BLK
36	AV_CRS_EXT_BLK	Fixed at 50
37	CDIV_EXTENSION	CDIV_EXT_BLOCKS
38	INTL_RECORDING_UNIT	NUM_INTL_RECORDING_UNITS
39	OOCRU	OOC_NUM_RU
40	DCR_EXTENSION	NUM_DCR_EXT_BLKS
41	E800_TCAP_EXT_BLK	NO_OF_TRANSACTION_IDS
42	ISUP_EXTENSION_BLOCK	NUM_ISUP_EXT_BLKS
43	SCRPAD_EXTEN_BLK	NUMBER_ECCB_SCRATCHPAD_AREAS
44	MCCS_EXTEN_BLK	NUMBER_ECCB_NCCS_AREAS_EXT_FMT_CD
45	MTR_EXT_BLOCK	NUM_CCMTR_EXT_BLOCKS
46	RDB_EXT_BLK	
47	FEATURE_XLA_DATA	NO_OF_FTR_XLA_BLKS
48	ICAMA_RECORDING_UNIT	NUM_ICAMA_RECORDING_UNITS
49	POTS_CFZ_EXTENSION	CFZ_EXT_BLOCKS
50	ACCS_TCAP_EXT_BLK	
51	RU250_RECORDING_UNIT	NO_OF_DMS_250_REC_UNITS
52	RTEB_EXTENSION	NUM_OF_RTEB_EXTBLKS

EXT_FORMAT_CODE entries (Sheet 4 of 8)

Index	EXT_FORMAT_CODE	Office parameter name
53	SO_RECORD_UNIT	KSAMA_NO_OF_RU_FOR_SO
54	ITOPSRU	TOPS_NUM_RU
55	HISTORY_CONTROL_DATA	NO_OF_HIS_CONTROL_BLKS0
56	GOSRU	
57	PVN_EXT_BLK	NO_OF_PVN_EXTBLK
58	DPNSS_EXT_BLOCK	NUMBER_OF_DPNSS_EXTENSION_BLOCKS
59	MTX_RECORDING_UNIT	
60	AUX EXTENSION BLK	NUMBER_AUX_EXTENSION_BLOCKS
61	TC_AP_SMALL_EXT_BLK	NO_OF_SMALL_EXT_BLKS
62	TC_AP_LARGE_EXT_BLK	NO_OF_LARGE_EXT_BLKS
63	TC_AP_XLARGE_EXT_BLK	NO_OF_XLARGE_EXT_BLKS
64	PVN_TCAP_EXT_BLK	NO_OF_PVN_EXTBLK
65	ICT_EXT_BLOCK	NUM_ICT_EXT_BLKS
66	EOPS_RECORDING_UNIT	NO_OF_EOPS_REC_UNITS
67	TC_AP_MEDIUM_EXT_BLK	NO_OF_MEDIUM_EXT_BLKS
68	PVN_TERM_EXT_BLK	NO_OF_PVN_TERM_EXTBLK
69	DMS250_BBF_EXT_BLK	NO_OF_DMS250_BBF_EXT_BLK
70	TPBX_EXTENSION	NUM_TPBX_EXT_BLKS
71	SCS_EXT_BLK_FC	NUM_OF_SCS_EXTBLKS
72	MTX_DATA_BLOCK	NUM_OF_MTX_DATA_BLOCKS
73	EOPS_EXT_BLK	TOPS_NUM_RU
74	MCI_EOPS_REC_UNIT	NO_OF_EOPS_REC_UNITS

EXT_FORMAT_CODE entries (Sheet 5 of 8)

Index	EXT_FORMAT_CODE	Office parameter name
75	E911_FEATURE_DATA_BLOCK	E911_NUMBER_OF_FDBS
76	TRAVER_EXT_BLK	
77	ACD_OVFLINQ_EXTENSION	ACD_OVERFLOW_BLOCKS
78	INTL250_RECORDING_UNIT	NO_OF_INTL_250_REC_UNIT
79	INWATS OSO/TSO EXT BLK	NO_OF_INWATS_EXT_BLOCKS
80	ZERO_PLUS_EXT_FC	ZERO_PLUS_EXT_BLK
81	SMALL_FEATURE_DATA	NO_OF_SMALL_FTR_DATA_BLKS
82	MEDIUM_FEATURE_DATA	NO_OF_MEDIUM_FTR_DATA_BLKS
83	LARGE_FEATURE_DATA	NO_OF_LARGE_FTR_DATA_BLKS
84	NSS_RDD_TCAP_EXT_BLK	
85	XLA_EXT	MARKET_OF_OFFICE
86	CRITICAL_FEATURE_DATA	NO_OF_CRITICAL_FTR_DATA_BLKS
87	NETAS_EXT_UNIT	
88	NETS_EXT_FMT_CODE	
89	NSS_TCN_TCAP_EXT_BLK	NUM_RC_EXT_BLKS
90	MXT_EXTEN_BLK	NCCBS
91	RC_EXT_BLK	NUM_RC_EXT_BLKS
92	DMS250_OCCB_EXT	
93	ACCSRU	ACCS_NUM_RU
94	CDR300_ISDN_RECORDING_UNIT	
96	CRS_SUBRU_POOL1	CRS_SUBRU_POOL1_SIZE
97	CRS_SUBRU_POOL2	CRS_SUBRU_POOL2_SIZE

EXT_FORMAT_CODE entries (Sheet 6 of 8)

Index	EXT_FORMAT_CODE	Office parameter name
98	CRS_SUBRU_POOL3	CRS_SUBRU_POOL3_SIZE
99	CRS_SUBRU_POOL4	CRS_SUBRU_POOL4_SIZE
100	CRS_PRU_POOL1	CRS_PRU_POOL1_SIZE
101	CRS_PRU_POOL2	CRS_PRU_POOL2_SIZE
102	VCDR_RECORDING_UNIT	NO_OF_VCDR_REC_UNITS
104	DMS250_DINA_EXT	
105	GSM_MAP_HLR_EXT_BLK	NUM_OF_GSM_MSG_BLOCKS
106	SMALL_EE_EXT_BLK	NUM_SMALL_EE_EXT_BLKS
107	MEDIUM_EE_EXT_BLK	NUM_MEDIUM_EE_EXT_BLKS
108	LARGE_EE_EXT_BLK	NUM_LARGE_EE_EXT_BLKS
109	REGULAR_HISTORY_DATA	NO_OF_HIS_DATA_BLKS (Field 1)
110	LARGE_HISTORY_DATA	NO_OF_HIS_DATA_BLKS (Field 2)
111	EXTRA_LARGE_HISTORY_DATA	NO_OF_HIS_DATA_BLKS (Field 3)
112	TOPSOC	
113	CAMA_CALLED_EXT_BLK_STRUCTURE	
114	SBS_EXTENSION_BLK	
115	CRS_PRU_POOL3	CRS_CRU_POOL3_SIZE
118	AIN_FTR_BLK	
119	TC_AP_COMPONENT_EXT_BLK	
120	DCTS_EXT_BLK_STRUCTURE	
121	DSD_EXT_BLKS	NUM_DSD_EXT_BLOCKS
123	CNAMD_TCAP_EXT_BLK	

EXT_FORMAT_CODE entries (Sheet 7 of 8)

Index	EXT_FORMAT_CODE	Office parameter name
124	DATA_CALL_TESTER_EXT	
125	AIN_PROCESSING_BLK	
126	FBS_EXT_FMT_CODE	
127	GSM_MAP_SCCP_EXTENSION_BLOCKS	
128	HANDOVER_PARAMETER_EXTENSION_BLOCKS	
129	GSM_INTERCALL_MSG_BUFFER	
131	REDIR_EXT_BLKS	REDIR_NUM_EXT_BLOCKS
134	AIN_TN_EXT_FMT_CODE	AIN_NUM_TERM_NOTIF_EXT_BLKS
135	MSGING_EXT_BLK	NO_OF_SDS_EXT_BLKS
138	EA_MF_SS7_EXT_BLOCK	EA_MF_SS7_EXT_BLOCK_COUNT
139	OSSAINRU	OSSAIN_NUM_RU
143	OLNS_TCAP_EXT_BLK	
147	CRS_SUBRU_POOL5	CRS_SUBRU_POOL5_SIZE
148	EMERG_EXT	ALLOC_EMERGENCY_EXT_BLK
161	OSACRU	
172	AIN_ORIG_INFO	NO_OF_ORIG_INFO_EXT_BLKS
174	TOPS_GEN_TCAP_EXT_BLK	
180	X_LARGE_FEATURE_DATA	NO_OF_X_LARGE_FTR_DATA_BLOCKS
182	HUGE_HIS_DATA_BLK_EXT_FCEXT_F ORMAT_CODE	
184	NS_EXT_FC	

EXT_FORMAT_CODE entries (Sheet 8 of 8)

Index	EXT_FORMAT_CODE	Office parameter name
198	DITM_AGENT_EXT_BLOCKS	NUMBER_OF_DITM_EXTENSION_BLOCKS
203	XLAS_EXT_BLK	NUM_XLAS_EXT_BLKS
???	INDA_EXT_FC	INDA_EXT_BLOCK
512	DMS_250_FEATURE_EXT_FMT_CD	NUMBER_OF_MCCS_EXT_BLOCKS
560	OVERFLOW_CCB_EXT_FC	NUMBER_OF_MNCOS_EXT_BLOCKS

Related functional groups

The following functional groups are associated with OM group EXT:

- All DMS office types
- ABS00001
- RES00002
- RES00005
- OSEA0001
- DSP0001
- SVBI0001

Registers

The following table lists the registers associated with OM group EXT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group EXT

Register name	Measures
EXTHI	Extension block high water
EXTOVFL	Extension block overflow
EXTSEIZ	Extension block seizures

EXTHI

Register type
Peg

Description
EXTHI records the maximum number of extension blocks in use at the same time during an OM transfer period. The OM transfer period can be 15 min or 30 minutes. To predict peak use accurately, gather high water marks for the busiest hours of the busiest days of the year. Follow either the High Day Busy Hour or the Extreme Value Engineering material. Calculate and adjust the supply of extension blocks. Calls during the busiest times should take no more than 80% of extension blocks.

At the start of a transfer period, the active register records the number of extension blocks in use. This number changes during the transfer period when the number of blocks in use exceeds the error recorded value.

At the end of the transfer period (15 or 30 minutes), the active register value moves to the holding register (EXTHI). The value stays in EXTHI until the end of the next transfer period, when the software writes over the value.

To predict true peak use, take the maximum value of all high water marks from transfer periods on the busiest days of the year. Add an additional amount to make sure that peak use of software resource is a maximum of 80%. Enter the calculated value in the office parameter for each given type of extension block value appears in table OFCENG.

Associated registers
EXTUSAGE was replaced by EXTHI.

Extension registers
EXTHI2

Associated logs
None

EXTOVFL

Register type
Peg

Description
EXTOVFL increases when the type of extension block requested for a call is not available. If the call cannot wait for a second attempt or second attempt fails, the call receives no-service-circuit (NOSC) treatment.

If the count in the register is not zero, you must review the supply of extension blocks of a given type. You can increase the number of extension blocks in table OFCENG.

Associated registers
None

Extension registers
None

Associated logs
None

EXTSEIZ

Register type
Peg

Description
EXTSEIZ increases when a request for a type of extension block is successful.

Associated registers
None

Extension registers
EXTSEIZ2

Associated logs
None