

NTP 297-3601-002

DMS-10 Family

600-Series Generics

Nortel Networks Technical Publications
Description and Use

06.01

For Generic 602.20 Standard August 2006

NORTEL

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Nortel Publications: NTP 297-3601-002
06.01
For Generic 602.20
Standard
August 2006

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Publication history

Issue	Date	Rating	For generic
01.01	August 2000	Preliminary	501
01.02	October 2000	Standard	501
02.01	January 2001	Preliminary	502
02.02	April 2001	Preliminary	502.10
02.03	June 2001	Standard	502.10
03.01	July 2002	Preliminary	503.10
03.02	August 2002	Standard	503.10
03.03	July 2004	Preliminary	505.10
03.03	August 2004	Standard	505.10
04.01	July 2005	Preliminary	601.10
04.01	August 2005	Standard	601.10
05.01	February 2006	Preliminary	602.10
05.01	March 2006	Standard	602.10
06.01	July 2006	Preliminary	602.20
06.01	August 2006	Standard	602.20

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Section 1: Introduction

Scope and purpose of this publication

The purpose of this Nortel technical publication (NTP) is to enable a user to locate the appropriate NTP(s) needed to accomplish a task. It covers all of the NTPs issued as part of a 600-Series Job Documentation Package.

For a complete listing of NTPs as well as an NTP index, refer to the NTP entitled *Index to Nortel Technical Publications (297-3601-000)*.

Note: The NTP set is updated in response to, and issued coincidentally with, the release of the latest DMS-10 generic. To determine the latest generic for which the NTPs have been updated, refer to the Publication History located on the verso of the title page of each NTP.

Organization

The following sections comprise the NTP:

- Section 1 Introduction
- Section 2 NTP numbering scheme
- Section 3 600-Series NTPs
- Section 4 Associated NTPs

Section 2 presents the general numbering scheme used with NTPs for all generics and explains how the “key number” portion can be used to identify specific NTPs.

Section 3 explains the organization of the NTPs written specifically for 600-Series generics and describes each NTP that supports those generics. The descriptions summarize the contents of the NTP and identify the intended audience of the NTP.

Section 4 describes additional NTPs that are part of the 600-Series set. These include miscellaneous NTPs, which contain general information for the system user, and the power equipment NTPs.

Section 2: NTP numbering scheme

General scheme

All NTPs are numbered according to the following scheme:

297-3ab1-ccc(Z).

The first four digits and the seventh digit are identical for all DMS-10 NTPs.

Discretionary numbers

The fifth and sixth digits (*a* and *b*) of the NTP number vary according to generic and product, respectively. Table 2-A lists the possible values of these digits and their meanings. For example, the *General Description* NTP for a 500-Series full-size DMS-10 switch is numbered 297-3601-100, while the same NTP for a 400-Series full-size DMS-10 switch is numbered 297-3401-100.

Table 2-A: NTP discretionary numbers	
Value	Definition
5th digit (a)	
1	All generics
2	200-Series generic
3	300-Series generic
4	400-Series generic
5	500-Series generic
6	600-Series generic
6th digit (b)	
0	DMS-10 switch (Full-size)
1	DMS-10M switch
2	DMS-10S switch
3	Not used
4	DMS-10 switch, SSO (Satellite Switching Office)
5	KS2 (Emergency Transportable Switch for Japan)

Table 2-A: (Continued) NTP discretionary numbers	
Value	Definition
6	Full-size DMS-10 switch for Japan

Key numbers

The last three digits (*ccc*), or “key-number” portion, of the NTP number are related to the type and scope of information contained in the publication, as follows:

- NTPs with key numbers 000 through 019 are indexes or guides to the NTPs or general information documents for the switch
- NTPs with key numbers 100 through 187 are system, subsystem, and hardware descriptions
- NTPs with key numbers 300 through 316 provide data modification instructions and operating procedures for the switch
- NTPs with key numbers 450 through 456 provide traffic administration information for the switch
- NTPs with key numbers 500 through 511 are system hardware maintenance and test descriptions and manuals
- NTPs with key numbers 900 through 906 provide information and instructions regarding specific features and functions of the switch that are not documented elsewhere

As a rule, NTPs with the lowest key number in each range tend to be more general and less technically detailed than NTPs with higher key numbers within that range. For example, the *General Description* (-100) describes an entire switching system, while NTPs on the billing subsystem of a switch have key numbers in the -120s.

Alphabetic suffix

The numbers of NTPs that are distributed outside of the United States are followed by the alphabetic suffix Z.

Section 3: 600-Series NTPs

Introduction

This section describes NTPs that support only the 600-Series DMS-10 switch. Each subsection groups NTPs by type and/or subject matter. This grouping for the principal NTPs in the set is depicted in Figure 3-1.

Reference aids

The following NTPs are designed to be used as reference aids to other, more detailed NTPs.

Index to Nortel Technical Publications (297-3601-000)

The *Index to Nortel Technical Publications* includes a subject index to the complete set of NTPs and tables listing the title, number, issue date and status of all NTPs that support 600-Series generics. The *Index to Nortel Technical Publications* also provides all the information necessary to order new or replacement NTPs. Because this NTP shows the current status of each document, operating company personnel can use it to verify that a set of NTPs is complete and up-to-date.

NTPs-Description and Use (297-3601-002)

This NTP provides an overview of the NTPs that are used with the 600-Series DMS-10 switch. NTPs are listed by major categories and each entry includes a brief description of the NTP, methods of using the NTP, and the intended audience.

Service Priority Classification Description (297-3601-019)

This publication contains information that applies to both DMS-10 and DMS-100. Nortel Networks Corporation supports a service priority classification system that establishes an interrelationship between customer problems and the appropriate level of reaction and resolution, based on the problem's direct or potential effect on subscriber service. This NTP defines priority levels and the criteria for their determination and describes Nortel Networks Corporation's resolution objectives.

System descriptions

The following NTPs provide general descriptions of the 600-Series DMS-10 switch. They present introductory information about the DMS-10 switch and, where appropriate, reference more detailed NTPs.

General Description (297-3601-100)

Together with the *Features and Services Description* (discussed later in this section), the General Description introduces the DMS-10 switch to a wide range of users, including executive, engineering, marketing, training, and maintenance personnel. Its purpose is to describe the basic hardware and software structure of the DMS-10 switch and to provide cross-references to more technically detailed NTPs. The following major sections are included:

- *System hardware and equipment configurations*, which describes the major hardware components of the system
- *System architecture*, which presents the system architecture and describes the interconnection and operation of the major functional components in the system
- *System software*, which introduces the modular structural principles of system software and describes the major functional tasks performed by software. The section concludes by tracing the progress of a call through the switching system.

Features and Services Description (297-3601-105)

The *Features and Services Description* introduces and briefly describes each feature and service offered by the DMS-10 switch. The NTP contains individual sections that describe subscriber services, line features, trunk features, system features, maintenance features, and administration features.

Automatic Message Accounting System (297-3601-124)

This publication contains a complete discussion of the Automatic Message Accounting (AMA) system. The following information is included:

- the capabilities of the AMA system
- AMA hardware configurations
- AMA-system operation
- DMS-10 Cluster AMA-system operation
- technical details of the DMS AMA recording format
- technical details of the Bellcore AMA recording format

System Performance Specifications (297-3601-180)

System Performance Specifications consists of tables that specify environmental limits, overall performance, and input/output parameters for the DMS-10 switch. By consulting these tables, engineering personnel can assess the applicability of the system to their requirements.

Grounding System (297-3601-187)

This NTP presents a detailed description of the grounding requirements for a DMS-10 switch. The NTP contains grounding requirements for the hardware (for example, cables and the ac power grounding panel) in a single-point ground system. Information on the isolated ground plane, earth grounds, water system grounds, and lightning rod protection is also included.

Hardware descriptions

Two detailed hardware descriptions are part of the 600-Series NTP package. One provides detailed information on the electronic components making up a DMS-10 switch. The second provides a comprehensive explanation of the circuits provisioned in the DMS-10 switch.

Equipment Identification (297-3601-150)

This NTP is useful to a variety of personnel, because it includes a brief description of the function, features, location, and provisioning of each of the major electronic components that make up the DMS-10 switch. The equipment descriptions are arranged by product engineering code (PEC) in individual sections dedicated to cabinets, bays, shelves, packs, and miscellaneous equipment.

Circuit Interfaces for Lines, Trunks, and Test Trunks (297-3601-184)

This NTP is a guide to designing and engineering connections between the system and subscriber lines, intra- and inter-exchange trunks, and subscriber-loop testing equipment. The NTP provides operating company personnel with the specifications necessary to select the proper circuit pack to fill the requirements as well as information needed for engineering external circuitry for connection to the system.

Data modification and operating procedures

The following NTPs provide information on the operation and data base management of the DMS-10 switch, which are accomplished through the input/output (I/O) system and the use of Data Modification Orders (DMOs).

Input/Output System (297-3601-300)

This NTP describes the I/O system that is used to perform data modification, maintenance, and operational measurements tasks in an operating switch. The NTP is intended for a variety of users; therefore, it includes general information about the I/O hardware and software, basic user instructions for entering commands, and output message format.

Data Modification Manual (297-3601-311)

The *Data Modification Manual* contains the overlays that operating company personnel use for data modification. The overlays, which are identified by three- or four-letter mnemonics, are arranged in alphabetical order by overlay mnemonic. To help the user locate specific sections of the NTP, the overlay mnemonics and procedure numbers are printed in large, boldface letters on the top outside corner of each page. The NTP contains:

- an introduction and user's guide that explains the organization of the NTP and provides instructions for its use
- service order procedures, which lead the user step-by-step through specific tasks
- overlays, which provide a list of the prompts and valid responses required to add, delete, query, or otherwise modify data

Dip Switch Settings for Printed Circuit Packs and Balance Networks (297-3601-316)

This publication contains information necessary for operating company personnel to set dual inline package (DIP) switches on printed circuit packs. This NTP should be consulted before inserting any circuit pack that is equipped with DIP switches. Specifications for setting switches on each pack include:

- a drawing that identifies each DIP switch and its approximate position on the pack
- one or more tables that indicate the switch-selectable options and the necessary settings for each option

Traffic administration

Traffic administration involves both the provisioning of the appropriate type and number of DMS-10 switch components based on the traffic load and the accumulation of operational measurements on system performance and level of service. NTPs concerned with traffic provisioning and operational measurements are discussed below.

Provisioning (297-3601-450)

The *Provisioning* NTP is designed to familiarize customers with basic provisioning guidelines so they can work efficiently with DMS-10 Customer Engineering, the group responsible for assisting customers in upgrading their switching equipment. The NTP includes definitions of traffic terminology and grade-of-service measurements as well as DMS-10 switch hardware configuration rules.

Operational Measurements (297-3601-456)

This publication describes the operational measurement (OPM) system used to accumulate data that indicate system performance and level of service. The NTP includes the following:

- a description of the accumulation, storage, and printout of OPM data
- sample printouts and explanations for each OPM measurement block
- a description of DMS-10 EADAS Operational Measurements support
- prompting sequences for the Operational Measurements Control program (Overlay OMC), which enables operating company personnel to control the updating and printout schedules of the OPMs

Maintenance and testing

The reliability and maintainability of the DMS-10 switch is enhanced by the use of diagnostic programs, test systems, and other maintenance aids. NTPs that cover maintenance and testing are discussed below.

General Maintenance Information (297-3601-500)

General Maintenance Information is a description of the maintenance system for all personnel involved in system testing and maintenance of the DMS-10 switch. The NTP outlines basic maintenance principles that govern the successful operation of the DMS-10 switch, including the alarm system, diagnostic programs, test lines and interfaces, and maintenance tools and precautions. The NTP also describes the built-in maintenance aids of the DMS-10 switch that:

- inform maintenance personnel (on-site or at a remote location) that a fault condition has been detected
- specify the type of fault and, in most cases, the physical location of the faulty piece of equipment
- indicate that the machine has reconfigured itself to recover from the fault
- provide facilities to test local or remote DMS-10 switch operation and verify that corrective maintenance has cleared the original fault

NE-3 Test Cabinet Operating Procedures (297-3601-502)

This NTP contains procedures, tables, and figures that allow the user to test subscriber lines or cable pairs using the NE-3 test cabinet associated with a DMS-10 switching system.

Maintenance Diagnostic Input Manual (297-3601-506)

The *Maintenance Diagnostic Input Manual* contains instructions for entering maintenance overlay commands. The NTP is designed to be readily used both by experienced individuals and those who are not familiar with DMS-10 switch operation.

The first major section of the NTP lists resident commands that are always accepted by the system. Explanations of the commands, their use, and the output that results from issuing the commands are provided.

Each subsequent section of the NTP is devoted to a particular maintenance overlay. The overlays, which are identified by three- or four-letter mnemonics, are arranged in alphabetical order. To help the user locate the overlay, the mnemonics are printed in large, boldface letters on the top outside corner of each page.

Each section begins with a brief description of the overlay, followed by a detailed description of the commands that can be used within that overlay. The commands are associated with either a particular task that can be performed or a functional unit that can be manipulated or queried. For individuals who are not familiar with DMS-10 switch maintenance, the description of each command contains an example of the system response to that command.

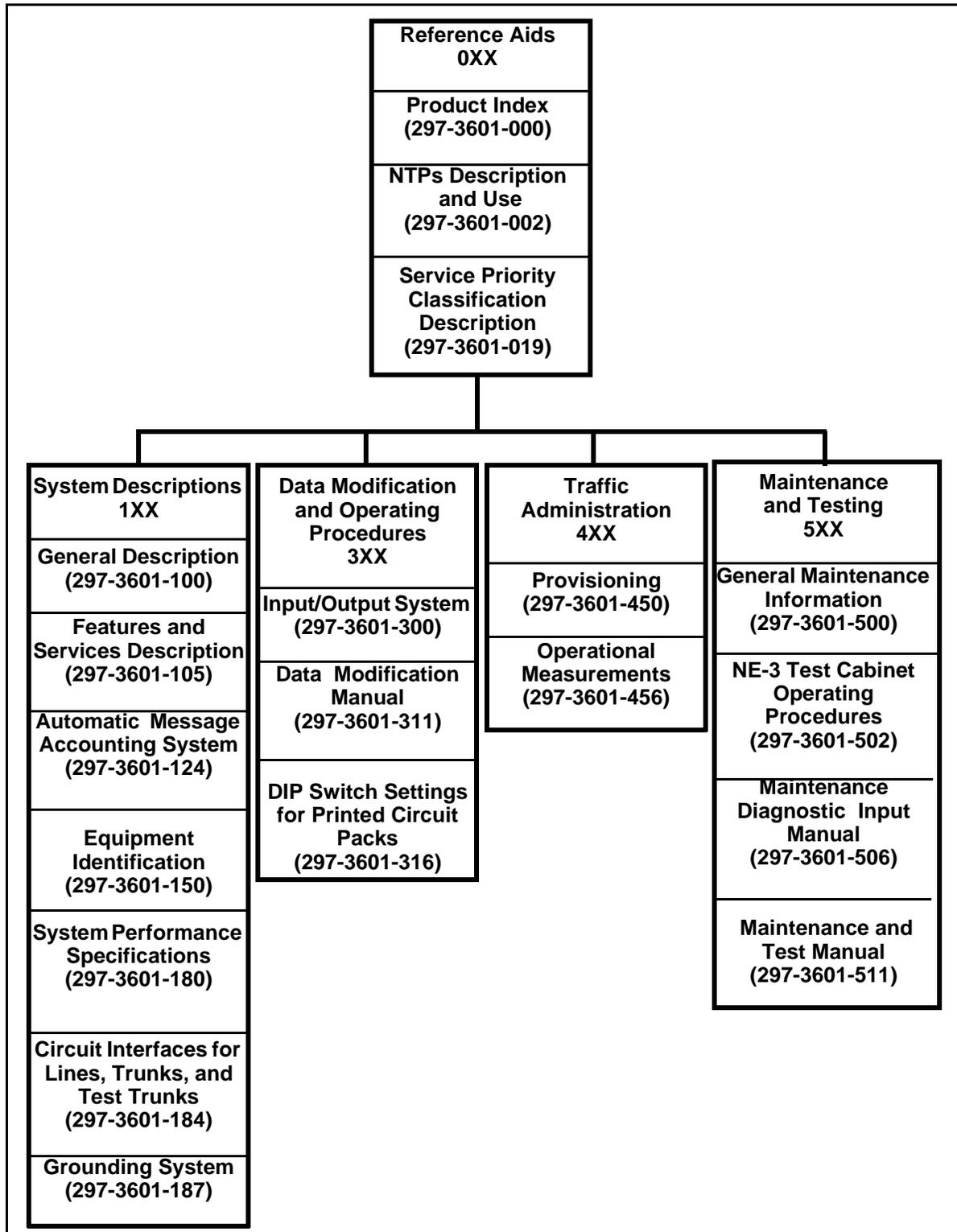
The final section of the NTP is an index which provides quick access to hardware-specific maintenance commands.

Maintenance and Test Manual (297-3601-511)

The *Maintenance and Test Manual* contains procedures for performing routine maintenance tasks, as well as procedures that are associated with trouble-shooting and repairing system faults. To help the user locate specific sections of the NTP, the procedure numbers are printed in large, boldface letters on the top outside corner of each page. The NTP includes:

- a user's guide for the NTP
- procedures used to trouble-shoot and repair system faults and to perform various maintenance functions
- an index to maintenance tasks

Figure 3-1: 600-Series NTP structure



Section 4: Associated NTPs

Introduction

This section describes additional NTPs that support 600-Series DMS-10 generics.

Miscellaneous NTPs

Pocket Guide to Maintenance Commands (297-3601-902)

This NTP contains a concise listing of maintenance commands used to diagnose and to recover from faults in the DMS-10 switch. This NTP is designed for use by those already familiar with DMS-10 switch operation.

Output Message Manual (297-3601-903)

This NTP contains messages that are output on the DMS-10 terminal or CPU pack display. Included with each message, as appropriate, is a reference to a procedure located in NTP 297-3601-511, *Maintenance and Test Manual* that should be used to correct the problem indicated by the message.

DMS-10 Data Networks (297-3601-906)

This NTP describes the DMS-10 Data Networks features and capabilities. The NTP also provides detailed descriptions of FTP and Telnet commands that are processed by the DMS-10 switch. In addition, the NTP includes procedures for setting up and maintaining the user interface to the DMS-10 Data Networks features.

4-2 Associated NTPs

DMS-10 Family

600-Series Generics

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NTP number: NTP 297-3601-002
Release: 06.01
For Generic 602.20
Status: Standard
Date: August 2006

