COMPAQ

Software Product Description

PRODUCT: Compaq TeMIP Access Module for Nortel DMS 500 Switch SPD 70.53.01

DESCRIPTION

The Compaq TeMIP DMS 500 Access Module (AM) provides an interface to the Nortel DMS 500 Switching System (product release load: LDD 0B 006, Standard Release Version 3.01). This Access Module supports fault management capabilities, receiving and processing unsolicited messages (Fault Management).

TeMIP for Tru64 UNIX® is a family of software products for the management of telecommunications and corporate networks, including fixed wire and mobile/cellular voice and data, multi-vendor, multi-technology networks. TeMIP V4.0 provides comprehensive off-the-shelf fault and trouble management functions such as Alarm Handling, Event Logging and Trouble Ticketing for telecommunications network management.

TeMIP supports the International Standards Organization (ISO) management standards ISO 10164-x and ISO 10165-x, the OMNIpoint 1 standards as defined by NMF and T1M1. TeMIP and its features are applicable in the context of the International Telecommunication Union-Telecom Standard Sector (ITU-T) X.73x and Telecommunications Management Network (TMN) M.3010 and M.3100 Recommendations. It gives network operators a global view of their networks, and enables them to activate management functions and operations from single or multiple workstations.

TeMIP is built on top of the TeMIP Framework and fully benefits from the object oriented and truly distributed software architecture.

SOLUTION COMPONENTS

The Nortel DMS 500 switch is directly interfaced to TeMIP by means of a combination of Management Modules:

- Either RS232, X.25 (Switched Virtual Circuits), TCP (IP sockets) or Telnet Communications Server Access Module

  This module (one of the above) is responsible for establishing and maintaining the physical connection to the equipment.

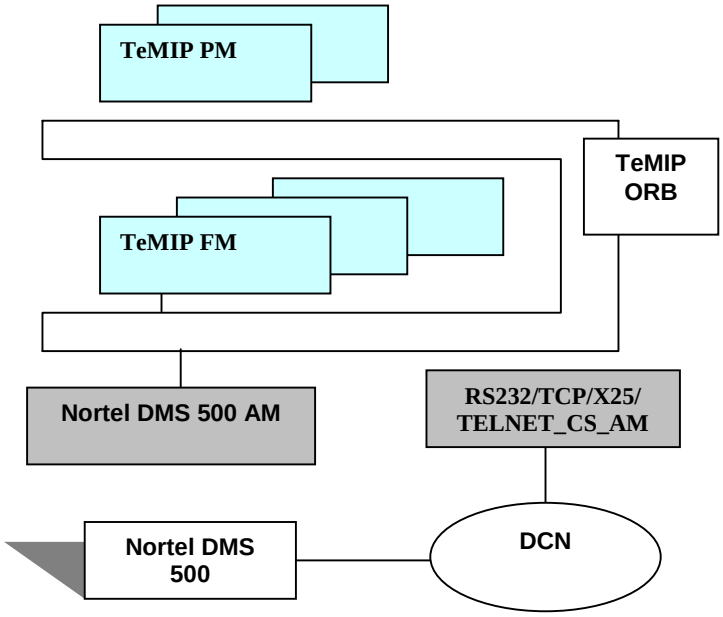
- DMS 500 AM

  This module is responsible for the Information Model representing the management capabilities of the equipment.

  This AM is also responsible for all associated semantic translations between its ASCII-based messaging interface and TeMIP data models.

The solution components are shown in Figure 1.

Figure 1: Solution Components



INFORMATION MODEL OUTLINE

The Nortel DMS 500 switch is represented by the Information Model given in Table 1.

Table 1: DMS 500 AM Hierarchy Description

Class	Child Class	Child Class	Description
IOEquipment			Represents various I/O equipment used for DMS maintenance and administration
	DDU		Disk Drive Units
	MTD		Magnetic Tape Drive units
	IOC		Main processing functionality to manage all I/O equipment
	DPP		Data Peripheral Processors
	TC		Interface terminals
ISDN			Related to the ISDN line cards
Trunk			Analog trunk module equipment
EXT			Related to all equipment external to the DMS
MISC			Miscellaneous functionality not covered by any other class
Line			Line cards
Network			Cross-connection functionality
Core			Computing and memory resources of the DMS-SuperNode
	SLM		Software Load Module
	MessageCore		DMS Internal message bus switching functionality
	ComputingCore		DMS central controller
CCS7			Common Channel Signalling Number 7
	LinkSet		Group of CCS #7 links
		Link	CCS #7 link
	RouteSet		Group of CCS #7 routes
		Route	CCS #7 route
Software			Software applications
	SupportOS		Operating System support functionality
	CallProcessing		Call Processing application
	Billing		Billing application
Peripheral			Peripheral modules
	DTC		Digital Trunk Controller
	LIU7		Line Interface Unit for CCS7 signalling link
	IBN		Integrated Business Network

MANAGEMENT CAPABILITIES SUMMARY

Unsolicited Messages Support

A DMS 500 switch produces many (several thousand) different messages that are categorised by message-type and message-subtype.

Refer to the *DMS 500 Log Reports Reference Manual, Volumes 1-6*. (297-2216-8401, 297-2216-8402, 297-2216-8403, 297-2216-8404, 297-2216-8405, 297-2216-8406) for an explanation of each message-type and subtype as well as the log subsystem that generates it.

Miscellaneous Management Capabilities

Automatic detection and reporting of communication failure using heartbeat monitoring.

Supported Messages

Table 2 indicates the message-types and sub-types that can be handled by the AM. Messages are handled either by default mapping rules, according to the message-type, or by specific mapping and parsing rules determined by the message sub-type.

For a given message type, all sub-types that are not explicitly listed in Table 2 are processed according to the same default rules.

Table 2: DMS 500 Supported Messages

Message Types	Sub-Types
ACD	121, 130
ACG	
ACMS	100-105
ACT	
AFT	
AIN	
ALRM	
ALT	
AMA	100, 112
AMAB	
AP	324
ATB	100
ATME	
ATT	
AUD	101-104, 395
AUDT	100-103, 105-118, 128-130, 150, 151, 159, 160-162, 168, 169, 180-183, 185, 186, 188, 189, 191-193, 195, 197, 205-207, 256-258, 260-262, 267, 396, 397, 400, 600, 603, 605
BERT	
BMS	
BOOT	
C7TU	
C7UP	100-102, 107, 109, 111, 112, 114, 118
CAIN	
CC	
CCS	101-110, 145-147, 151-178, 186, 189-193, 195-199, 201-243, 245, 246, 248-253, 296, 299, 500-505, 601, 701, 703, 750, 900, 901
CDC	101, 102
CDR	
CDRE	
CFW	
CM	100, 101, 103-130, 133, 134, 137, 140-149, 151-160, 162-175, 178-181
CMC	
CMS	
CMSM	
COMM	
CQ	
DAIS	
DCA	
DCH	100, 101, 104
DCME	103
DCR	

Message Types	Sub-Types
DDIS	
DDM	
DDU	100, 101, 202-205, 208-211
DEV	
DFIL	100, 131
DIRP	101
DISK	301-304
DLC	
DOM	
DPAC	
DPP	101, 102
DTSR	
DUTL	
DVID	
E911	
EADD	
EATS	
ECTS	
EIO	
ENCP	
ENET	100, 103-105, 108, 111, 114, 120, 200, 203, 205, 208, 211, 303, 304, 400, 505, 506
EQAC	
ESA	
EXT	100-103, 107-109
FCDR	
FCO	
FLCV	
FLEX	
FM	100, 101
FMT	
FP	
FPRT	
FRS	
FTR	
FTU	
GHLR	
GIWF	
GMSC	
GVLR	
HEAP	
IBN	102, 103
ICMO	
ICTS	
IDFY	
IDPL	
IOAU	
IOD	102-105, 107-120, 124-127, 202-212, 303-305, 308, 310
IOGA	
ISDN	100, 102, 106-110, 112
ISP	
ITN	201, 203-206, 301, 302, 304, 310-313, 315
ITOC	101
KTRK	
LINE	101, 102, 115, 117, 205
LLC	
LMAN	
LMSC	
LMSP	
LNP	
LOST	101-113
MET	

Message Types	Sub-Types
MFC	
MIS	
MM	100, 101, 110, 111
MOD	
MPC	103, 903-905, 908
MS	100-105, 153-155, 208, 248, 260-267, 284-286, 300-306, 313-315, 323-325, 413
MSRT	
MTCB	101, 104
MTD	102, 103
MTR	
MTS	
N6	
NAG	
NCS	
NET	
NETM	103, 104, 115, 116, 122-124, 146
NETS	
NMS	
NO6	
NODE	
NOP	101
NPAC	
NSS	
NWM	111
OCC	
OM2	
OMPR	
PCH	
PEND	
PES	100, 103, 105, 06, 108, 114
PM	106, 109-111, 125, 127, 128, 131, 139, 153, 154, 162, 163, 167, 184, 186, 190-194, 222, 223, 230, 235, 270
POOL	
PRFM	
PSN	
PT	
RDT	
REPL	
RL	
RMAN	
RO	104
RONI	
SALN	
SCAI	
SDMB	
SDS	
SLE	
SLM	200, 208, 401-406
SLNK	
SMDI	100, 101
SME	
SNAC	
SOC	302
SOS	100-102, 110, 130, 603-605
SRC	
SSR	
SST	
STOR	
STR	
SWCT	
SYNC	203, 209

Message Types	Sub-Types
TCAP	
TCCI	
TELN	
TIBM	
TKCV	
TMED	
TOPS	
TPS	
TRK	101-104, 123, 312
TRKT	
TRMS	
TUPL	
UTR	
V5	
VAMP	
VMX	
VSN	
WARN	
WB	
WUCR	

HARDWARE REQUIREMENTS

Supported Alpha AXP Processors:

DIGITAL Personal Workstation au series
DIGITAL Ultimate Workstation
AlphaStation 600
AlphaServer 800, 1000A, 1200
Compaq AlphaServer DS10, DS20

AlphaServer 2000, 2100, 4000, 4100
Compaq AlphaServer ES40

AlphaServer 8200, 8400
Compaq AlphaServer GS60, GS140

Disk Space Requirements:

Disk space required for installation:
Subset copy: 12 Mbytes
Installation: /usr 40 Mbytes

Disk Space Required for Use (Permanent):
No specific requirement

Memory Requirements:

The minimum memory supported, due to a TeMIP Framework prerequisite, is 128 Mbytes. However, the use of this software in conjunction with increased memory capability improves performance.

SOFTWARE REQUIREMENTS

Compaq Tru64 UNIX® Operating System V4.0F
TeMIP Framework V4.0

OPTIONAL SOFTWARE

TeMIP Graphical ASCII Toolkit V4.0

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the current version requirements.

YEAR 2000 READY

This product is Year 2000 Ready.

“Year 2000 Ready" products are defined by Compaq as products capable of accurately processing, providing, and/or receiving date data from, into and between the twentieth and the twenty-first centuries, and the years 1999 and 2000, including leap year calculations, when used in accordance with the associated Compaq product documentation and provided that all hardware, firmware and software used in combination with such Compaq products properly exchange accurate date data with the Compaq products.

For additional information visit Compaq’s Year 2000 Product Readiness web site located at http://www.compaq.com/year2000

To ensure that this product is Year 2000 Ready, code assessment and system tests to verify the transition between December 31st 1999 and January 1st 2000 were utilized.

To ensure that this product interoperates properly with other hardware and software, the system tests involving Compaq’s TeMIP V4.0 are applicable, as this product was verified as being Year 2000 Ready.

DISTRIBUTION MEDIA

This software is available by electronic means, distributed directly by Compaq TeMIP Engineering Team in Sophia Antipolis, France. The team can be contacted through your local Compaq office, which sends an internal e-mail to vbetemipsupp@compaq.com (containing customer identification and proof of license purchase).

ORDERING INFORMATION

Compaq TeMIP Access Module for Nortel DMS 500 Switch (Fault Management)

Software License:

- QM-689AA-AA

Software Product Services:

- QT-689**-** or QR-SP689-A9

Notes:

1. * denotes variable fields. For additional information on available services, or hardware platform tiers, refer to the appropriate price book.
2. The QM number corresponding to the TeMIP Graphical ASCII Toolkit V4.0 (Run-Time) must also be purchased (QL-5SMAA-AA).

SOFTWARE LICENSING

This software is furnished under the licensing provisions of Compaq Computer Corporation's Shrink-wrap Terms and Conditions. The license is a Corporate wide license, i.e. can be copied as many times as necessary on systems using the same TeMIP Namespace. However, one Graphical ASCII Toolkit runtime license per copy of the Access Module is required.

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COMPAQ TRU64 UNIX LICENSE MANAGEMENT

This product uses the FLEXlm Software License Key system.

A FLEXlm key must be obtained using information provided with the license deliverable. An authorization number is provided for each license, which allows the user to obtain license keys from an Internet Web Server according to instructions provided with the License Certificate.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from Compaq. For more information, contact your local Compaq office.

SOFTWARE WARRANTY

This software product is provided by Compaq with a 90-day conformance warranty in accordance with the Compaq warranty terms and applicable to the license purchase.

The above information is valid at the time of release. Please contact your local Compaq office for the most up-to-date information.

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