



Software Product Description

PRODUCT: Compaq TeMIP Access Module for Nortel DMS GSP

SPD 80.50.00

DESCRIPTION

The Compaq TeMIP Nortel DMS GSP Access Module (AM) provides an interface to the Nortel DMS GSP (Software version: GSP (07)). This Access Module supports fault management capabilities. It receives and processes 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.

TeMIP 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.

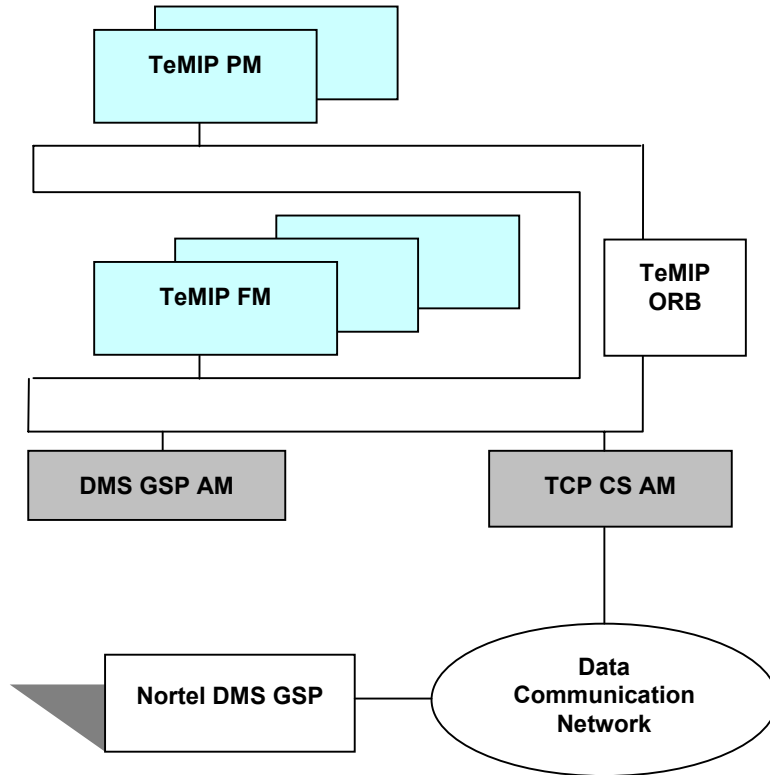
Solution Components

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

- The TCP Communications Server Access Module, responsible for establishing and maintaining the physical connection to the equipment. (As an alternative to the TCP Communications Server, either the X.25 (SVC), RS232 or Telnet Communications Servers could also be envisioned),
- The Nortel DMS GSP AM, responsible for the Information Model representing the management capabilities of the equipment as well as all associated semantic translations between its ASCII-based messaging interface and TeMIP data models.

The solution components are shown in Figure 1.

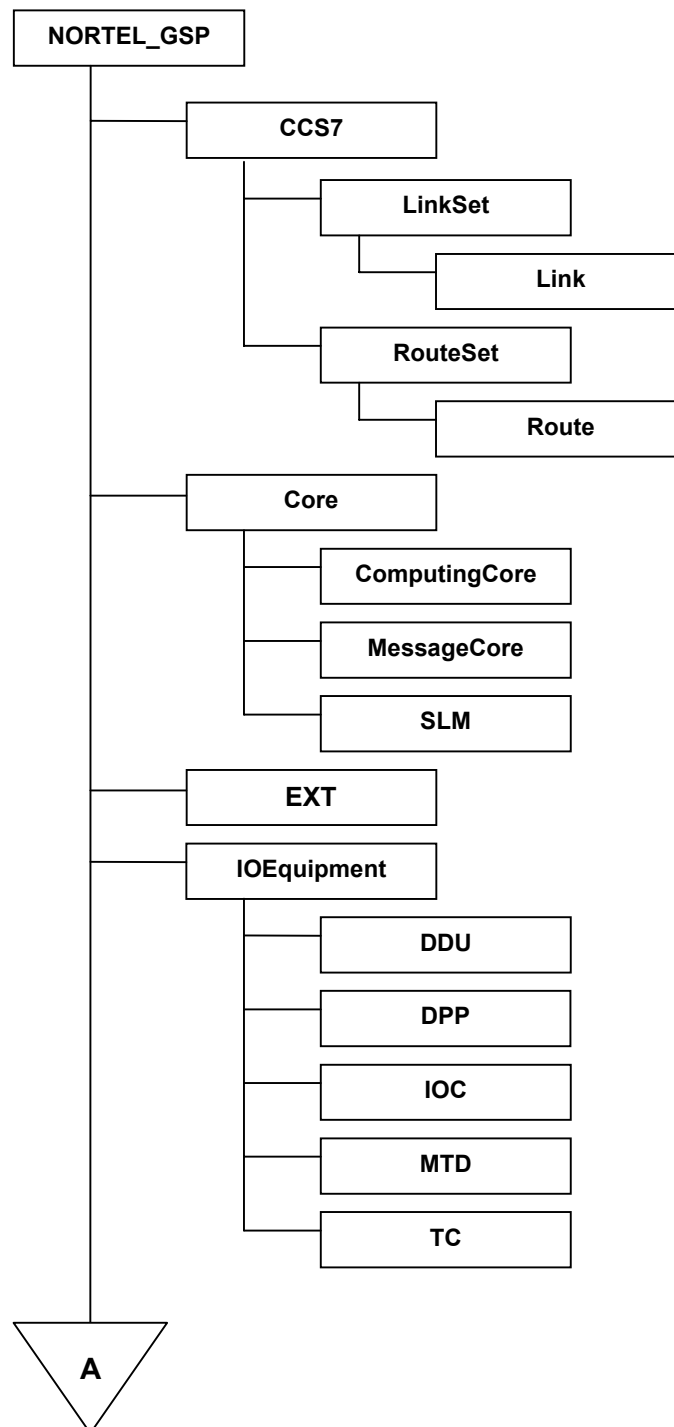
Figure 1: Solution Components

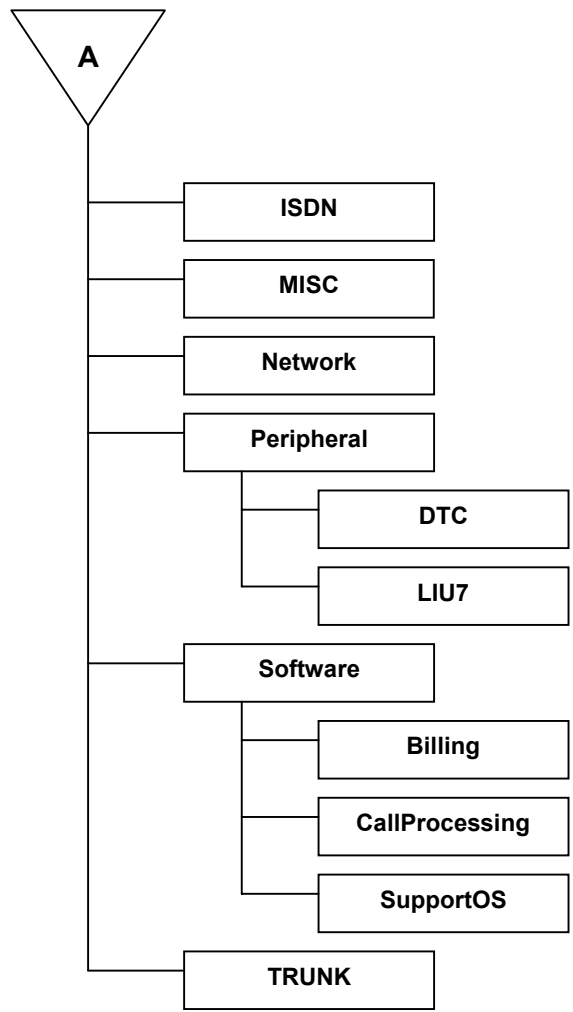


Information Model

The Nortel DMS GSP is represented by the information Model shown in Figure 2.

Figure 2: Information Model





The meaning of each class is described in Table 1.

Table 1: DMS GSP Hierarchy Description

Class	Child Class	Child class	Child class	Description	Cardinality
NORTEL_GSP				Nortel DMS GSP system	N
	CCS7			Common Channel Signalling Protocol Number 7 (CCS #7) is used by the signalling network for transmitting telephony messages related to groups of speech circuits	N
		LinkSet		CCS #7LinkSets, which consist of one or more links	N
			Link	CCS #7 Links	N

Class	Child Class	Child class	Child class	Description	Cardinality
		RouteSet		CCS #7 RouteSets, which consist of one or more routes	N
			Route	CCS #7 Routes	N
	Core			Equipment classes, which constitute the computing and memory resources of the DMS	N
		ComputingCore		Central controller of the DMS - it provides system management, system sanity, maintenance and call processing functions	N
		MessageCore		All of the equipment in DMS use an internal message bus to communicate with each other. The MessageCore subclass encapsulates this message switching functionality	N
		SLM		The SLM (software load module) is responsible for loading/unloading applications into the memory module of the DMS	N
	EXT			The EXT subclass is responsible for managing all equipment external to the DMS	N
	IOEquipment			Various I/O equipment, which are used for DMS maintenance and administration	N
		DDU		Disk Drive Units	N
		DPP		Data Peripheral Processors which maintain the terminal information and audit interval	N
		IOC		The IOC subclass provides the main processing functionality to manage all I/O Equipment	N
		MTD		Magnetic Tape Drive units	N
		TC		All types of interface terminals	N
	ISDN			Integrated Services Digital Network (ISDN) Line cards	N
	MISC			Miscellaneous functionality, which is not covered by any of the above classes	N
	Network			Actual cross-connection (or switch fabric) functionality	N
	Peripheral			All types of peripheral modules a DMS can support	N
		DTC		Digital Trunk Controller equipment	N
		LIU7		Line Interface Unit for CCS7 signalling link	N

Class	Child Class	Child class	Child class	Description	Cardinality
	Software			Software applications, which can be dynamically downloaded to the memory	N
		Billing		Billing application	N
		CallProcessing		Call Processing application	N
		SupportOS		Operating system support functionality	N
	TRUNK			Various types of analog trunk module equipment	N

MANAGEMENT CAPABILITIES SUMMARY

Unsolicited Messages Support

A Nortel DMS GSP produces many (a few thousand) different messages that are categorized by message-type and message-subtype. Although there are some similarities, each message is generally in a different format and sometimes even has several different valid formats.

The DMS GSP AM Mapping Table indicates the message-types and sub-types to be handled by the AM and how they will be supported. Messages will be handled either by default mapping rules according to the message-type or 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.

Commands Support

There is no specific command supported by this AM.

Alarm Clearance

Some alarm messages have a corresponding alarm clear message. So, alarm clearing is performed based on some fields in the message, according to ITU-T standards:

The alarm has severity clear; and the Managed Object, Event Type, Probable Cause and Specific Problem fields are the same as a previous alarm.

MISCELLANEOUS MANAGEMENT CAPABILITIES

The DMS GSP AM shall implement the features listed below:

- Automatic detection and reporting of communication failure

Table 2: Nortel DMS GSP Supported Messages

Message Types	Message Sub-types
ACT---	100, 101, 102
AFT---	001, 002, 003
AMA---	100, 112
AP---	324
ATME---	200, 202, 206, 207, 208
ATT---	
AUD---	101, 102, 103, 104, 395, 430, 519
AUDT---	159, 160, 161, 162, 168, 169, 179, 180, 181, 182, 183, 189, 191, 192, 193, 195, 205, 206, 207, 256, 257, 258, 260, 261, 262, 267, 396, 397, 400, 600, 603, 605
BERT---	100
BMS---	
BOOT---	
C7TU---	
C7UP---	100, 101, 102, 107, 109, 111, 112, 114, 118

Message Types	Message Sub-types
CCS---	101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 145, 146, 147, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 186, 189, 190, 191, 192, 193, 195, 196, 197, 198, 199, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 245, 246, 248, 249, 250, 251, 252, 253, 296, 299, 500, 501, 502, 503, 504, 505, 601, 701, 703, 750, 900, 901
CDR---	
CM---	100, 101, 103, 104, 105, 107, 108, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 133, 134, 137, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 178, 179, 180, 181
CMSM---	
DAIS---	
DCA---	
DCME---	103
DCR---	
DDIS---	
DDM---	106
DDT---	
DDU---	100, 101, 202, 203, 204, 205, 208, 209, 210, 211
DEV---	
DFIL---	100, 131
DIRP---	101
DISK---	301, 302, 303, 304
DOM---	
DPAC---	
DTSR---	
DUTL---	
ECTS---	
ENCP---	
ENET---	103, 104, 105, 108, 111, 114, 120, 200, 203, 205, 208, 211, 303, 304, 400, 505, 506
EXT---	100, 101, 102, 103, 107, 108, 109
FM---	100, 101
FP---	
FPRT---	
FTR---	
FTU---	
HEAP---	
ICTS---	
IDPL---	
IOAU---	
IOD---	102, 103, 104, 105, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 124, 125, 126, 127, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 303, 304, 305, 308, 310
IOGA---	
ISDN---	100, 102, 106, 107, 108, 109, 110, 112
ITN---	201, 202, 203, 204, 205, 206, 301, 302, 304, 310, 311, 312, 313, 315
ITOC---	101
KTRK---	
LMSC---	
LOST---	101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113
MFC---	
MM---	100, 110, 111
MOD---	

Message Types	Message Sub-types
MPC---	103, 903, 904, 905, 908
MS---	100, 101, 102, 103, 104, 105, 153, 154, 155, 208, 248, 260, 261, 262, 263, 264, 265, 266, 267, 284, 285, 286, 300, 301, 302, 303, 304, 305, 306, 313, 314, 315, 323, 324, 325, 413
MSRT---	
MTCB---	101, 104
MTD---	102, 103
MTS---	
NET---	
NETM---	104, 115, 116, 122, 123, 124, 146
NODE---	
NOP---	101
NPAC---	
NWM---	104, 111
OCC---	
OM2---	200
OMPR---	
PCH---	
PEND---	
PM---	102, 105, 106, 107, 108, 109, 110, 111, 114, 115, 116, 117, 125, 127, 128, 131, 139, 180, 181, 187, 190, 191, 192, 193, 194, 199, 230, 235, 270
POOL---	
PRFM---	
PT---	
RL---	
RO---	104
SLM---	200, 208, 401, 402, 403, 404, 405, 406
SOC---	302
SOS---	100, 101, 102, 110, 130, 603, 604, 605
SRC---	
SSR---	
SST---	
STOR---	
STR---	
SWCT---	
SYNC---	202, 203
TCAP---	
TELN---	
TKCV---	
TPS---	
TRK---	101, 102, 103, 104, 111, 123, 312, 320, 321, 322, 334
TRMS---	
TUPL---	
UTR---	

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: 15 Mbytes
 Installation: /usr 48 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 GSP (Fault Management)

Software License:

- QM-6KFAA-AA

Software Product Services:

- QT-6KF**-** or QR-SP6KF-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 (QM-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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