COMPAQ

Software Product Description

PRODUCT: TeMIP Access Module for Nortel DMS 200 Switch   **SPD 70.55.00**

DESCRIPTION

TeMIP 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 V3.2 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.

The TeMIP DMS 200 Access Module (AM) is part of this program and provides an interface to the Nortel DMS 200 Switching System (product release load: GWCARR03 (CSP07)). This Access Module supports fault management capabilities, receiving and processing unsolicited messages.

SOLUTION COMPONENTS

The Nortel DMS 200 switch is directly interfaced to TeMIP by means of a combination of Management Modules:

- The RS232 or X.25 (Switched Virtual Circuits) or TCP (IP sockets) Communication Server Access Module is responsible for establishing and maintaining the physical connection to the equipment.

- The DMS 200 AM is 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
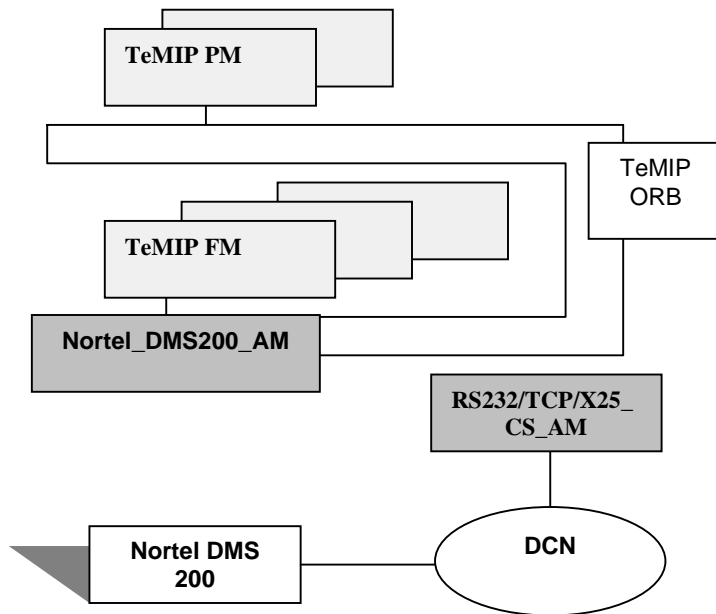
INFORMATION MODEL OUTLINE

The Nortel DMS 200 switch is represented by the Information Model given in Table 1.

Table 1: DMS 200 Hierarchy Class 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.

Class	Child Class	Child Class	Description
	LIU7		Line Interface Unit for CCS #7 signalling link.
	IBN		Integrated Business Network.

MANAGEMENT CAPABILITIES SUMMARY

Unsolicited Messages Support

A DMS 200 switch produces many (several thousand) different messages that are categorized by message-type and message-subtype.

Refer to the *DMS 200 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 200 Supported Messages

	Message Types	Sub-Types
1.	ACD	121, 130
2.	ACT	
3.	AFT	
4.	AIN	
5.	ALRM	
6.	ALT	
7.	AMA	100 112
8.	AMAB	
9.	AOSS	
10.	AP	324
11.	APS	
12.	ATB	100
13.	ATME	
14.	ATT	
15.	AUD	101-104, 395
16.	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
17.	BERT	
18.	BMS	
19.	BOOT	
20.	C6TU	
21.	C7TD	
22.	C7TU	
23.	C7UP	100-102, 107, 109, 111, 112, 114, 118
24.	CAIN	
25.	CC	
26.	CCI	
27.	CCIS	
28.	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
29.	CDC	101, 102
30.	CDIV	

31.	CFW	
32.	CLIV	
33.	CM	100, 101, 103-130, 133, 134, 137, 140-149, 151-160, 162-175, 178-181
34.	CMSM	
35.	COMM	
36.	CP	100, 101, 103
37.	CPM	
38.	CRMG	
39.	DAS	
40.	DCA	
41.	DCH	100, 101, 104
42.	DCI	100, 104, 303, 505
43.	DCP	104-107, 307, 806
44.	DCR	
45.	DDIS	
46.	DDM	
47.	DDT	
48.	DDU	100, 101, 202-205, 208-211
49.	DEV	
50.	DFIL	100, 131
51.	DIRP	101
52.	DISK	301-304
53.	DLC	
54.	DNPC	
55.	DPAC	
56.	DPNS	
57.	DPP	101, 102
58.	DTSR	
59.	DVI	
60.	ECTS	
61.	EIN	301, 305, 310
62.	ENCP	
63.	ENDB	
64.	ENET	100, 103-105, 108, 111, 114, 120, 200, 203, 205, 208, 211, 303, 304, 400, 505, 506
65.	EQAC	
66.	ESG	
67.	ESR	
68.	ESA	
69.	ESYN	100, 101
70.	EXT	100-103, 107-109
71.	FCO	
72.	FM	100, 101
73.	FMT	100, 101
74.	FP	
75.	FPRT	
76.	FREQ	
77.	FTR	
78.	FTU	
79.	HEAP	
80.	IBN	102, 103
81.	ICTS	
82.	IDPL	
83.	IMGR	
84.	INIT	
85.	INTL	
86.	IOAU	
87.	IOD	102-105, 107-120, 124-127, 202-212, 303-305, 308, 310
88.	IOGA	
89.	ISA	
90.	ISDN	100, 102, 106-110, 112
91.	ISP	

92.	ITN	201, 203-206, 301, 302, 304, 310-313, 315
93.	ITOC	101
94.	ITOP	
95.	KTRK	
96.	LAQ	
97.	LINE	101, 102, 115, 117, 205
98.	LLC	
99.	LMAN	
100.	LMSC	
101.	LMSP	
102.	LNP	
103.	LOGD	
104.	LOST	101-113
105.	MCT	
106.	MDN	
107.	MFC	
108.	MIS	
109.	MISC	
110.	MISM	
111.	MM	100, 101, 110, 111
112.	MOD	
113.	MPC	103, 903-905, 908
114.	MPCS	
115.	MPX	
116.	MS	100-105, 153-155, 208, 248, 260-267, 284-286, 300-306, 313-315, 323-325, 413
117.	MSL	
118.	MSRT	
119.	MTCB	101, 104
120.	MTD	102, 103
121.	MTR	
122.	MTS	
123.	N6	100, 103, 106, 107, 127, 129, 132, 140, 300-319, 400-405, 407
124.	N6TU	
125.	NAG	
126.	NCS	
127.	NET	
128.	NETM	103, 104, 115, 116, 122-124, 146
129.	NMS	
130.	NO6	
131.	NODE	
132.	NOP	101
133.	NPAC	
134.	NSS	
135.	NWM	111
136.	OAIN	300-304, 500, 502-507, 600-615, 700, 701
137.	OAP	
138.	OCCP	
139.	OCS	
140.	ODM	
141.	OLS	
142.	OM2	200
143.	OMA	
144.	OMPR	
145.	OMRS	
146.	OMX	
147.	OPP	
148.	OSAC	
149.	OSF	
150.	OSTR	
151.	PCH	
152.	PEND	
153.	PES	100, 103, 105, 106, 108, 114

154.	PM	106, 109-111, 125, 127, 128, 131, 139, 152, 154, 162, 163, 167, 184, 186, 190-194, 222, 223, 230, 235, 270
155.	POOL	
156.	PRA	
157.	PRFM	
158.	QSM	
159.	QSIG	103-109
160.	RDT	
161.	REPL	
162.	RMAN	
163.	RO	104
164.	RONI	
165.	SALN	
166.	SCAI	
167.	SDM	
168.	SDS	
169.	SECU	
170.	SLE	
171.	SLM	200, 208, 401-406
172.	SLNK	
173.	SMDI	100, 101
174.	SME	
175.	SNAC	
176.	SOC	302
177.	SOS	100-102, 110, 130, 603-605
178.	SPC	
179.	SRC	
180.	SSR	
181.	SST	
182.	STOR	
183.	SWCT	
184.	SWER	
185.	SWNR	
186.	SYNC	203, 209
187.	TCAP	
188.	TCCI	
189.	TELN	
190.	TIBM	
191.	TKCV	
192.	TME	
193.	TOPP	
194.	TOPS	
195.	TPS	
196.	TQMS	
197.	TRAP	
198.	TRK	101-104, 123, 312
199.	TRMS	
200.	TSYN	
201.	TUPL	
202.	TVSN	
203.	UAPM	
204.	UCPE	
205.	UOAM	302
206.	USLG	
207.	UTR	
208.	V5	
209.	VMX	
210.	VSN	
211.	VSND	
212.	WARN	
213.	WTNP	
214.	WUCR	

HARDWARE REQUIREMENTS

Supported Alpha AXP Processors:

> AlphaServer 8200
> AlphaServer 8400
> DEC/4600, DEC/4700
> DEC/7600, DEC/7700
> DEC/10600

> AlphaServer 2000
> AlphaServer 2100
> AlphaServer 4000
> AlphaServer 4100
> AlphaStation 600
> DEC/3500, DEC/3500S, DEC/3500X
> DEC/3800, DEC/3800S
> DEC/3900

> AlphaServer 300 (Melmac)
> AlphaServer 400
> AlphaServer 800

> AlphaServer 1000
> AlphaStation 200
> AlphaStation 250

> AlphaStation 255
> AlphaStation 400
> AlphaStation 500
> DEC/2300S
> DEC/2500
> DEC/3300, DEC/3300L,
> DEC/3300X, DEC/3300LX
> DEC/3400, DEC/3400S
> DEC/3600, DEC/3600S
> DEC/3700

> PWS 433
> PWS 500
> PWS 600

> Ultimate Workstation 533

Disk Space Requirements:

> Disk space required for installation:
> Subset copy: 26000 Kbytes
> Installation: /usr 99000 Kbytes

> 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

DIGITAL UNIX Operating System V4.0D

TeMIP Framework V3.2

OPTIONAL SOFTWARE

TeMIP Graphical ASCII Toolkit V2.0.

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.

The testing used to confirm the Year 2000 readiness of this product included code assessment and system tests to verify transition dates.

DISTRIBUTION MEDIA

This software is available by electronic means, distributed directly by the Engineering Team in NSIS/CIS Telecom, contactable through your local Compaq office, which sends an internal e-mail to vbetemipsupp@digital.com (containing customer identification and proof of license purchase).

ORDERING INFORMATION

TeMIP Access Module for Nortel DMS 200 Switch

Software License: QL-68BA9-AA

Software Product Services: QT-68B**-**

Notes:

1. * denotes variable fields. For additional information on available services, or hardware platform tiers, refer to the appropriate price book.

2. The QL number corresponding to the TeMIP Graphical ASCII Toolkit V2.0 (Run-Time) must also be purchased (QL-5SMAM-3B).

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