



Software Product Description

PRODUCT NAME: Compaq TeMIP Access Module for Newbridge 46020 SPD 80.29.00

DESCRIPTION

The TeMIP Newbridge 46020 Access Module (AM) provides a Q3 interface to the Newbridge 46020 System running a Newbridge ConnectExec agent version 8.2. This Access Module supports fault management capabilities, receiving and processing unsolicited event reports and also some provisioning capacities, managing and testing logical links and paths of a Newbridge network.

Compaq TeMIP for DIGITAL 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 V3.2 provides comprehensive off-the-shelf fault and trouble management functions such as Alarm Handling and Event Logging for telecommunications network management.

TeMIP supports the International Standards Organization (ISO) management standards ISO 10164-x and 10165-x. TeMIP and its features are applicable in the context of the International Telephone Union-Telecommunication Standards (ITU-T) X.73x and Telecommunication Management Network (TMN) M.3010, M3100 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 Newbridge 46020 System components

The Newbridge 46020 System is a Mediation Device, which operates on Newbridge network elements through proprietary interface. Thus, it is interfaced through the OSI Newbridge ConnectExec Agent that provides a Q3 interface to TeMIP.

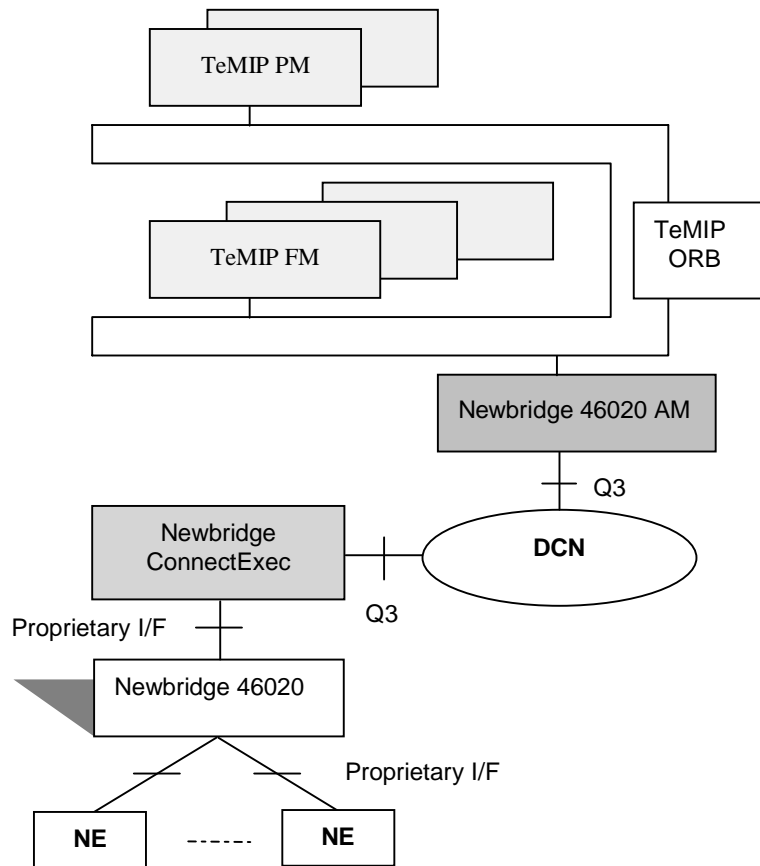
The TeMIP solution components

The Newbridge 46020 System, through the associated Newbridge ConnectExec OSI agent, is directly interfaced to TeMIP by means of a Management Module and the DECcmi stack:

- The DECcmi stack, responsible for establishing and maintaining the physical connection to the equipment.
- The Newbridge 46020 AM, responsible for the Information Model representing the management capabilities of the equipment in the TeMIP data models as well as event reporting and logging capabilities. The Newbridge 46020 AM model is based on the Newbridge ConnectExec OSI Agent GDMO model.

The solution components are shown in Figure 1.

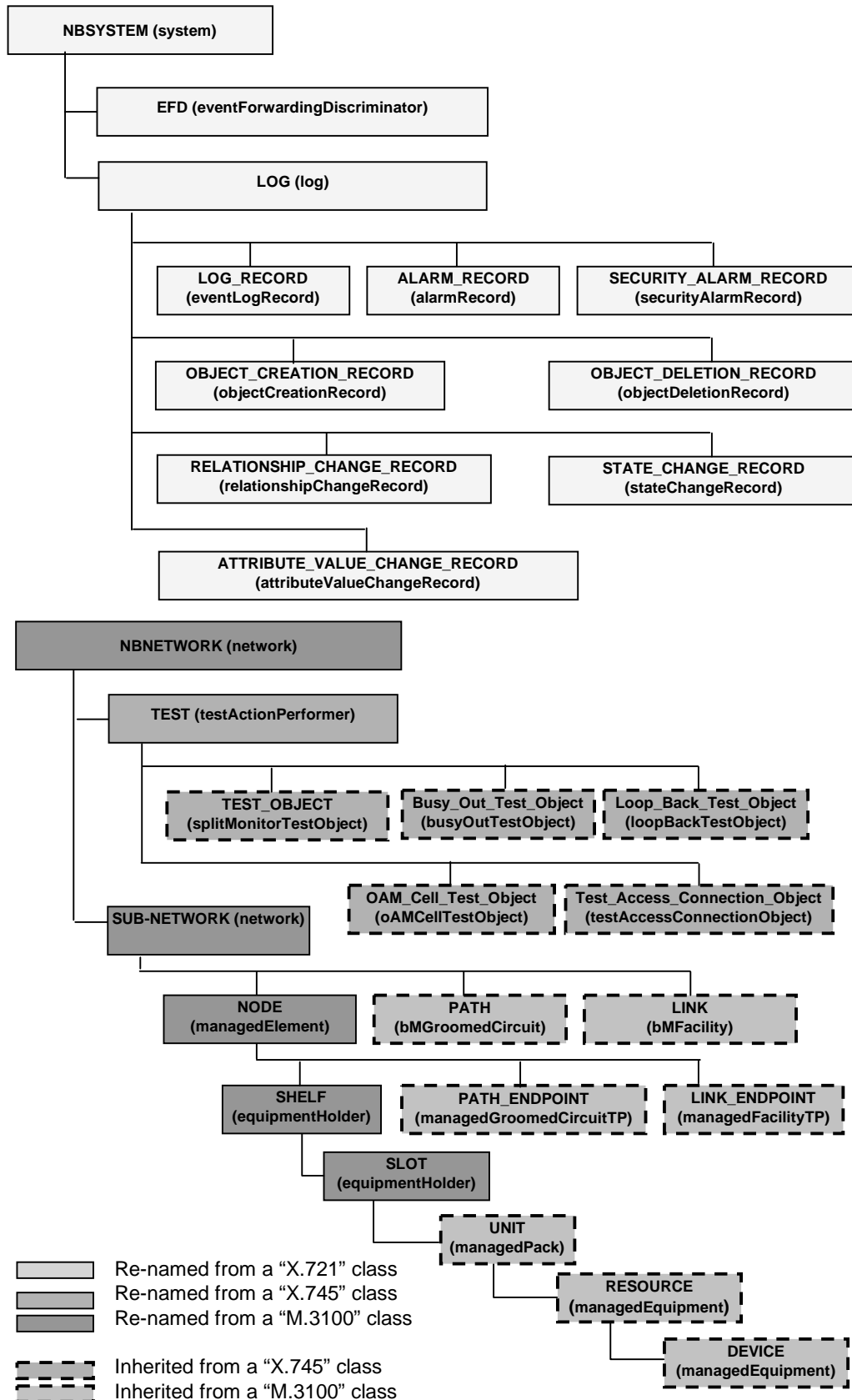
Figure 1 Solution Components



INFORMATION MODEL OUTLINE

The Information Model shown in Figure 2 represents the Newbridge 46020.

Figure 2: Information Model



The meaning of each class is described in Table 1 below.

Table 1: Newbridge 46020 Class Description

Global Class	Child Class	Description	Cardinality
NBSYSTEM		This represents both the Newbridge ConnectExec agent that provides the 46020 Network Manager with a Q3 interface and the 46020 network in order to log events that occur in the network and to forward them to a TeMIP Manager.	N
	EFD	The Event Forwarding Discriminator models the mechanism to forward events from the Newbridge ConnectExec Agent to a TeMIP Manager according to criteria defined by a CMIP filter called discriminator.	N
	LOG	This represents the storage of incoming event reports generated by a managed object of the Newbridge 46020 network and the local system notifications.	N
	LOG_RECORD	This represents the information stored in the log as a result of receiving notifications or incoming event reports.	N
	ALARM_RECORD	This represents the log information that result from alarm notifications or event reports.	N
	ATTRIBUTE_VALUE_CHANGE_RECORD	This represents the log information that result from notifications of a change on an attribute value or from event reports.	N
	OBJECT_CREATION_RECORD	This represents the log information that result from notifications of an object creation or from event reports.	N
	OBJECT_DELETION_RECORD	This represents the log information that result from notifications of an object deletion or from event reports.	N
	RELATIONSHIP_CHANGE_RECORD	This represents the log information that result from notifications of an object change of relationship or from event reports.	N
	SECURITY_ALARM_RECORD	This represents the log information that result from security alarm notifications or event reports.	N
	STATE_CHANGE_RECORD	This represents the log information that result from notifications of an object change of state or from event reports.	N

Global Class	Child Class	Description	Cardinality
NBNETWORK		This represents the Newbridge ConnectExec agent itself and its function of Gateway to the Newbridge 46020 network.	N
	SUB_NETWORK	This represents the Newbridge 46020 Network or a network partition.	N
	LINK	This represents a Physical or, either a Frame Relay or ATM, Logical Link established between two nodes of the Newbridge 46020 network.	N
	PATH	This represents a Logical Path established between two nodes of the Newbridge 46020 network.	N
	NODE	This represents a node of a Newbridge 46020 partition-level network.	N
	LINK_ENDPOINT	This represents an End/Termination Point of a Link. This is part of a node of the Newbridge 46020 network.	N
	PATH_ENDPOINT	This represents a End/Termination Point of a Path. This is part of a node of the Newbridge 46020 network.	N
	SHELF	This represents, for a Node, the physical element that provides slots to plug cards.	N
	SLOT	This represents, for a Shelf of a Node, a power supply slot, a fan slot or a card slot.	N
	UNIT	This represents a power supply, a fan or a card, which is plugged in a slot.	N
	RESOURCE	This represents a resource when the resource can not serve as a PATH or LINK ENDPOINT.	N
	DEVICE	This represents a port when the port can not serve as a PATH or LINK ENDPOINT.	N

MANAGEMENT CAPABILITIES SUMMARY

Unsolicited Event Reports support

The Newbridge 46020 System can generate different event reports. The Newbridge 46020 AM can handle all unsolicited alarm reports with some level of severity sent by the Mediation Device, i.e., TeMIP will capture all alarm types with severity critical, major, minor, warning and indeterminate sent by the equipment.

All the event reports supported by the objects specified in the Newbridge 46020/ConnectExec GDMO model, are supported by the Newbridge 46020 AM.

Alarm Clearance

Several alarm reports have a correlated clearance report. For these reports the Newbridge 46020 AM generates corresponding clearance reports as any other event reports, so that the alarm correlation can be performed. TeMIP correlates alarms according to the following rules:

- If the clear alarm provides a value to the Notification Identifier, all alarms that have the same Managed Object instance and the same Notification identifier will be cleared.
- If the clear alarm does not provide a value to the Correlated Notification identifier, all alarms that have the same Managed Object instance, same Probable Cause, same Event Type and the same Specific Problem (as the values provided in the clear alarm) will be cleared.

Alarm Information

Table 2 lists the Newbridge 46020 alarm reports that are recognised and processed by the Newbridge 46020 AM. The reports may be generated either from the Newbridge 46020 Network Manager as Trouble Tickets (TT) or other origin, from the Newbridge ConnectExec as Agent Alarms (AA) or from the Newbridge network as Path Status Changes (PSC).

Table 2: Alarm Types

Source Object Class	Event Type	Likely Origin
NBNETWORK	-	-
SUB_NETWORK	-	-
LINK	Communications Alarm	TT, PSC
	State Change	AA
PATH	Communications Alarm	PSC
	State Change	AA
NODE	Trm_Circuit_Groomed	Not Emitted
	Communications Alarm	Not Emitted
	Environmental Alarm	Not Emitted
	Equipment Alarm	TT, AA
	Processing Error Alarm	AA
LINK_ENDPOINT	State Change	AA
	Communications Alarm	TT or other
PATH_ENDPOINT	State Change	AA
	Communications Alarm	TT or other
SHELF	Communications Alarm	Not Emitted
	Environmental Alarm	Not Emitted
	Equipment Alarm	TT
	Processing Error Alarm	Not Emitted
	State Change	Not Emitted
SLOT	Communications Alarm	Not Emitted
	Environmental Alarm	Not Emitted
	Equipment Alarm	TT
	Processing Error Alarm	Not Emitted
UNIT	State Change	Not Emitted
	Communications Alarm	Not Emitted
	Environmental Alarm	Not Emitted

Source Object Class	Event Type	Likely Origin
	Equipment Alarm	TT
	Processing Error Alarm	Not Emitted
	State Change	AA
RESOURCE	Communications Alarm	Not Emitted
	Environmental Alarm	Not Emitted
	Equipment Alarm	TT
	Processing Error Alarm	Not Emitted
	State Change	AA
DEVICE	Communications Alarm	Not Emitted
	Environmental Alarm	Not Emitted
	Equipment Alarm	TT
	Processing Error Alarm	Not Emitted
	State Change	AA
TEST	-	-
TEST_OBJECT	Processing Error Alarm	AA
	Test_Result_Notification	Not Emitted
	State Change	Not Emitted
Busy_Out_Test_Object	Test_Result_Notification	AA
	State Change	Not Emitted
Loop_Back_Test_Object	Test_Result_Notification	AA
	State Change	Not Emitted
OAM_Cell_Test_Object	Test_Result_Notification	AA
	State Change	Not Emitted
Test_Access_Connection_Object	Test_Result_Notification	AA
	State Change	Not Emitted
NBSYSTEM	-	-
EFD	State Change	AA
LOG	Processing Error Alarm	Not Emitted
	State Change	AA
LOG_RECORD	-	-

Source Object Class	Event Type	Likely Origin
ALARM_RECORD	-	-
ATTRIBUTE_VALUE_CHANGE_RECORD	-	-
OBJECT_CREATION_RECORD	-	-
OBJECT_DELETION_RECORD	-	-
RELATIONSHIP_CHANGE_RECORD	-	-

Source Object Class	Event Type	Likely Origin
D		
SECURITY_ALARM_RECORD	-	-
STATE_CHANGE_RECORD	-	-

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: 6,000 Kbytes
 Installation: /usr 12,600 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

Compaq Tru64 UNIX V4.0D

TeMIP Framework V3.2

A TeMIP OSI Access Module run time license is also required

OPTIONAL SOFTWARE

TeMIP OSI Management Toolkit V3.2

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 inter-operates properly with other hardware and software, the system tests involving Compaq's TeMIP V3.2 are applicable, as this product was verified as being Year 2000 Ready.

DISTRIBUTION MEDIA

This software is available by electronic means, distributed directly by the Engineering Team in NSIS/CIS Telecom, who 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

TeMIP Access Module for Newbridge 46020 Fault Management.

Software License:

- QM-6GJAA-AA.

Software Product Services:

- QT-6GJ *-T* or QR-SP6GJ-A9

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 OSI Access Module V3.2 (Run-Time) must also be purchased (QL-2HHA9-AA) in any case.
3. The QL number corresponding to the TeMIP OSI Management Toolkit V3.2 (Development Kit) must also be purchased (QL-2HEA9-AA) if the Newbridge 46020 model has to be merged with one or several other OSI models.

SOFTWARE LICENSING

This software is furnished under the licensing provisions of Compaq Computer Corporation's Shrinkwrap Terms and Conditions.

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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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