CA Spectrum® Infrastructure Manager and Nortel Preside Multiservice Data Manager

Integration Guide

Release 9.4

ca technologies

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This document references the CA Spectrum® Infrastructure Manager (CA Spectrum).

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Chapter 1: Installing and Configuring MDMConnector

This section contains the following topics:

About Nortel Preside MDM and CA Spectrum (see page 7)
Install the MDMConnector Files (see page 8)
MDMConnector Configuration (see page 9)
Start the MDMConnector (see page 11)

About Nortel Preside MDM and CA Spectrum

Nortel Preside Multiservice Data Manager (MDM) is an element management system (EMS) for managing faults, configuration, accounting, performance, and security of Nortel's telecommunications network and devices.

Note: For details about Nortel MDM operation and concepts, see the Nortel product documentation.

The MDMConnector integrates Nortel Preside MDM telecommunication networks and devices with CA Spectrum's Telco EMS Manager. MDMConnector runs on the same machine as the MDM application. Nortel Preside MDM uses a node to represent any managed element, including devices, ports, cards, shelves, and so on. Links, which are a physical or logical connection between two nodes, are also supported. When you discover and model a network managed by MDM, the MDMConnector queries the MDM Network Modeling server for nodes and links and forwards them to CA Spectrum. MDMConnector also registers with the MDM Alarm and Status server for events and forwards them to CA Spectrum. MDMConnector periodically checks status of MDM and reports it to CA Spectrum along with its own status through the heartbeat mechanism.

The MDMConnector files are installed only with the Solaris version of CA Spectrum. You must run the MDMConnector setup from the Solaris host that the MDM software is running on, but it can be configured to connect to a SpectroSERVER running on any supported platform.

Note: Integration supports version 15.X of Nortel Preside MDM.

More information:

MDMConnector Configuration (see page 9)

Install the MDMConnector Files

The MDMConnector executable and all associated configuration files are installed on the SpectroSERVER host machine in the TelcoEMSManager directory. The files are bundled into the MDMConnector.tar file, which you must copy to the MDM Server host machine.

To copy and install the MDMConnector files

1. Copy the MDMConnector.tar file to a new, empty directory on the MDM Server host machine.
2. From the directory on the MDM server host, run the following command:

   ```
   $ tar xvf MDMConnector.tar
   ```

   The following files appear in the directory:

   - MDMConnector
   - MDMConnector.cfg
   - MDMConnector.lst
   - MDMConnector.sh
   - libtelcohelper.so.1
   - libssorbconvert.so.1
   - libVPapi.so.1
   - libcosnm_r.so
   - libssorb.so.1
   - libssorbutil.so.1
   - libGlobl.so.1
   - libtelcocorba.so.1
   - liborb_r.so
   - libvport_r.so
   - libPort.so.1

MDMConnector Configuration

You can configure MDMConnector with the MDMConnector.cfg configuration file. This file is in the same directory as the MDMConnector binary. All parameters should be specified in the 'name = value' format. MDMConnector runs with default values if the configuration file is not present or if parameters are missing. The following lists the configuration parameters with their default values:

SPECTRO_SERVER

Specifies the name of the machine where the SpectroSERVER is running.

Default: localhost

TRACE_FILE

Specifies the file name of the log file.

Default: MDMConnector.log

TRACE_LEVEL

Specifies the trace level for the log messages. The possible values are:

0 = No messages are logged

1 = Only error messages are logged

2 = Detail log for debugging

Default: 0

SPEC_FILE

Specifies the file specifying the discovery criteria. MDMConnector discovers components from MDM based on contents of this file.

Default: MDMConnector.lst

EMS_ID

Specifies the EMS identifier. This should be unique for every EMS (MDM server) that CA Spectrum monitors.

Default: MDM_*<local machine>*

EMS_VENDOR

Specifies the vendor name for managed components.

Default: CA

TYPES_DIR

Specifies the name of the directory where MDM stores the .ltdf and .mtdf files which contain information about different component types. The default value is the current directory.

MDM_USER

Specifies the MDM username used for registering with MDM.

Default: mdpadmin

MDM_ALARM_FORMAT

Specifies the alarm format used while displaying MDM alarms. The possible values are:

- 0 = EPI_ALARM_TERSE_FORMAT
- 1 = EPI_ALARM_NORMAL_FORMAT
- 2 = EPI_ALARM_FULL_FORMAT

Default: EPI_ALARM_FULL_FORMAT

OSAGENT_PORT

Specifies the ORB Agent Port to connect to the SpectroSERVER.

Default: 14008

Discovery Specification File

You can specify a list of nodes and links to discover in the discovery specification file. The default discovery specification file is the MDMConnector.lst file. The MDMConnector.lst file has four sections:

node

Specifies the list of nodes you want to discover. 'All' discovers all the nodes.

nodeTypeId

Specifices the list of node types that you want to discover.

link

Specifies the list of links to discover. 'All' discovers all the links.

linkTypeId

Specifies the list of link types to discover. All the links of the specified types will be discovered.

Start the MDMConnector

You must start the MDMConnector as the same user account that started MDM.

To start MDMConnector

1. Log in to the MDM server machine as the MDM user.
2. Change to the directory where the MDMConnector files are installed on the MDM server.
3. Enter the following command:

```
$ ./MDMConnector.sh
```

Chapter 2: Discovery and Modeling

This section contains the following topics:

Discover MDM Equipment (see page 13)
MDM Modeling (see page 13)

Discover MDM Equipment

Discovery is the process in which CA Spectrum communicates with all installed Nortel Preside MDMConnectors and directs them to collect information about the Nortel MDM nodes. Each MDMConnector then communicates with its associated Nortel Preside MDM server and retrieves the desired network and device information. The MDMConnector then sends the discovery data back to CA Spectrum to be modeled in the database. CA Spectrum's Telco EMS Manager can discover any or all managed elements and links in a Nortel Preside MDM.

To perform a discovery of all desired MDM equipment

1. Navigate to the Telco EMS Manager application in OneClick by expanding the desired landscape icon in the Navigation panel, and then selecting Telco EMS Manager.
2. In the Information tab of the Component Detail panel, expand the Configuration subview to display Telco Discovery.
3. Click Discover.

   The Discovery process begins; any discovered MDM nodes are added to the landscape.

MDM Modeling

CA Spectrum stores all the Nortel Preside MDM equipment data in the SpectroSERVER's modeling database.

Nortel Preside MDM uses a node to represent any managed element, including devices, ports, cards, shelves, and so on. Links, which are a physical or logical connection between two nodes, are also supported. For this reason, CA Spectrum uses two different model types to model any node or link in a Nortel Preside MDM: TelcoEMSManagedElement (0x4fd0001) and TelcoEMSManagedLink (0x4fd0003).

Note: Dynamic models are created inside the Nortel Preside MDM only when a problem exists on a Static model and an alarm needs to be created. When there are no remaining alarms on a Dynamic model, it may be destroyed by the Nortel Preside MDM. Static models are persistent within the Nortel Preside MDM until the model is no longer being managed by the Nortel Preside MDM. To maintain event and alarm history when a Dynamic model is destroyed within a Nortel Preside MDM, the Dynamic model is not automatically destroyed in CA Spectrum.

A TelcoEMSManagedElement or TelcoEMSManagedLink model can be copied and pasted anywhere in the CA Spectrum network topology views (Universe, World, or TopOrg). This lets you arrange your network containment based on your organization needs. CA Spectrum associates TelcoEMSManagedElement models appropriately to reflect the hierarchical relationship of managed elements (device-> board-> port-> logical port) in MDM.

TelcoEMSManagedElement Model Type Attributes

The following list describes the TelcoEMSManagedElement model type attributes.

EmsID

The name of the Nortel Preside MDMConnector or Nortel Preside MDM station where TelcoEMSManagedElement is located.

Attribute ID: 0x4fd0003

EmsComponentId

The unique name that identifies the TelcoEMSManagedElement in the associated Nortel Preside MDM and within CA Spectrum.

Attribute ID: 0x4fd0000

EmsElementDescr

The description given to this element inside the Nortel Preside MDM.

Attribute ID: 0x4fd0004

EmsElementType

The type given to this element inside the Nortel Preside MDM.

Attribute ID: 0x4fd0005

EmsVendor

The vendor of this element inside the Nortel Preside MDM.

Attribute ID: 0x4fd0007

EmsPersistence

The persistence type of this element, either Static or Dynamic.

Attribute ID: 0x4fd0008

TelcoEMSManagedLink Model Type Attributes

The following list describes the TelcoEMSManagedElement model type attributes.

EmsId

The name of the Nortel Preside MDMConnector or Nortel Preside MDM station where TelcoEMSManagedLink is located.

Attribute ID: 0x4fd0003

EmsComponentId

The unique name that identifies this TelcoEMSManagedLink in the associated Nortel Preside MDM and within CA Spectrum.

Attribute ID: 0x4fd0000

EmsLinkDescr

The description given to this link inside the Nortel Preside MDM.

Attribute ID: 0x4fd0004

EmsLinkType

The type given to this link inside the Nortel Preside MDM.

Attribute ID: 0x4fd0005

EmsPersistence

The persistence type of this link, either Static or Dynamic.

Attribute ID: 0x4fd0008

Chapter 3: Accessing Nortel Preside MDM within OneClick

This chapter describes how to use Nortel Preside MDM with OneClick. In particular, it describes how you can access and work with Nortel Preside MDM using the various OneClick components.

This section contains the following topics:

Navigation Panel (see page 17)
Contents Panel (see page 19)
Component Detail Panel (see page 19)

Navigation Panel

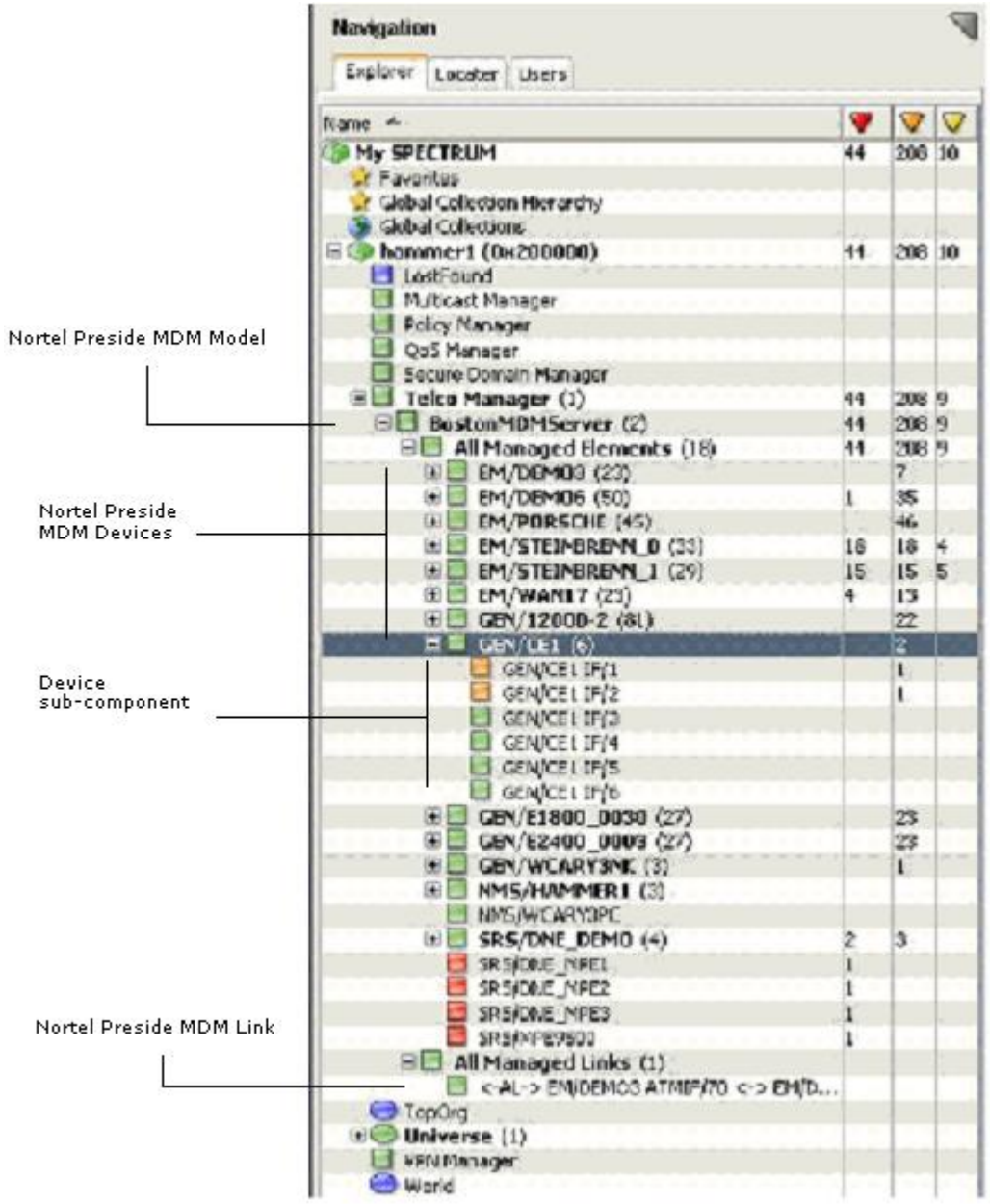
In the Explorer tab of the OneClick Navigation panel, expand the desired landscape to display the Telco EMS Manager application. Every Nortel Preside MDMConnector that connects successfully with CA Spectrum is represented by its corresponding model. Expand the Telco EMS Manager model to display all Nortel Preside MDM models connected with CA Spectrum.

All TelcoEMSManagedElement and TelcoEMSManagedLink models managed in CA Spectrum appear inside the All Managed Elements or All Managed Links model within the Nortel Preside MDM model.

The All Managed Elements model contains all device models connected to a Nortel Preside MDM model. Expand the desired device model to display its sub-components.

The All Managed Links model contains a list of all links managed by the selected Nortel Preside MDM. Expand the desired link to display its sub-links.

The following image displays an expanded view of Telco EMS Manager and its elements.



Contents Panel

The information displayed in the Contents panel is determined by the model or element selected in the Navigation panel and the tab selected in the Contents panel. The following sections discuss the different tabs in the Contents panel.

Alarms tab

When you select any Nortel Preside MDM model in the Navigation panel, the Alarms tab displays all alarms on the selected model and its sub-components.

List tab

The List tab displays all immediate sub-components of the model selected in the Navigation panel. Depending on the type of models displayed in the List tab, different information appears in the columns.

Topology tab

The Topology tab is disabled for all Nortel Preside MDM-related models because they do not have their own topology. Any TelcoEMSManagedElement or TelcoEMSManagedLink model can, however, be copied and pasted into any of the CA Spectrum network topology views (Universe, World, or TopOrg). This lets you arrange your network containment as desired.

Component Detail Panel

The information displayed in the Component Detail panel depends on which model or element is selected in the Navigation panel and in the Contents panel. When you select a model in the Alarms tab or the List tab of the Contents panel, the Component Detail panel displays information about the selected model.

Note: To view the Component Detail of a container model that has children (such as the Telco EMS Manager model or a Nortel Preside MDM model), you must select the List tab in the Contents panel and press the Control (Ctrl) key to deselect all models listed. This lets OneClick display the container model's information in the Component Detail panel.

Information Tab

The Information tab displays the configuration options for different elements as follows:

Telco EMS Manager Model

The Information tab for the Telco EMS Manager model contains the following sections:

General Information

Displays the basic CA Spectrum information about the model.

Configuration

Starts a new Telco Discovery.

Telco EMS List

Displays a list of the Nortel Preside MDMs that are currently connected with this landscape.

Nortel Preside MDM Model

The Information tab for the Nortel Preside MDM model contains the following sections:

General Information

Displays the basic CA Spectrum information about the model.

Telco Sub-Component List

Shows the following Telco model grouping containers:

- All Managed Elements
- All Managed Links

All Managed Elements/All Managed Links

When you select the All Managed Elements or All Managed Links grouping container, the Information tab contains the following sections:

General Information

Displays the basic CA Spectrum information about the model.

Telco Sub-Component List

Shows all of the top-level models such as devices or links.

TelcoEMSManagedElement

The Information tab for the TelcoEMSManagedElement model contains the following sections:

Telco Managed Element Information

Displays the EMS-specific information describing the model.

General Information

Displays the basic CA Spectrum information about the model.

Telco Sub-Component List

Shows all the TelcoEMSManagedElement models that are sub-components of the selected model such as cards, slots, ports, and so on.

TelcoEMSManagedLink

The Information tab of the TelcoEMSManagedLink model contains the following sections:

Telco Managed Link Information

Displays the EMS-specific information describing the model.

General Information

Displays the basic CA Spectrum information about the model.

Telco Sub-Component List

Shows all the TelcoEMSManagedLink models that are sub-components of the selected model such as logical links.

Connected Telco Managed Element List

Displays the two TelcoEMSManagedElement models connected by the selected link model.

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