



Integrated EMS Configuration Management

Introduction

Configuration Management in Nortel Networks Integrated EMS includes:

- adding objects
 - platforms
 - element managers
 - EMS applications
 - network elements
- editing object properties
- viewing object properties
- viewing the inventory
- resynchronizing element manager details

Integrated EMS provides user friendly GUIs to perform the above operations. These tasks can be done from Java Web Start Client and Web Client GUIs. The *Integrated EMS Configuration Management guide*, NN10330-511 is divided into the following:

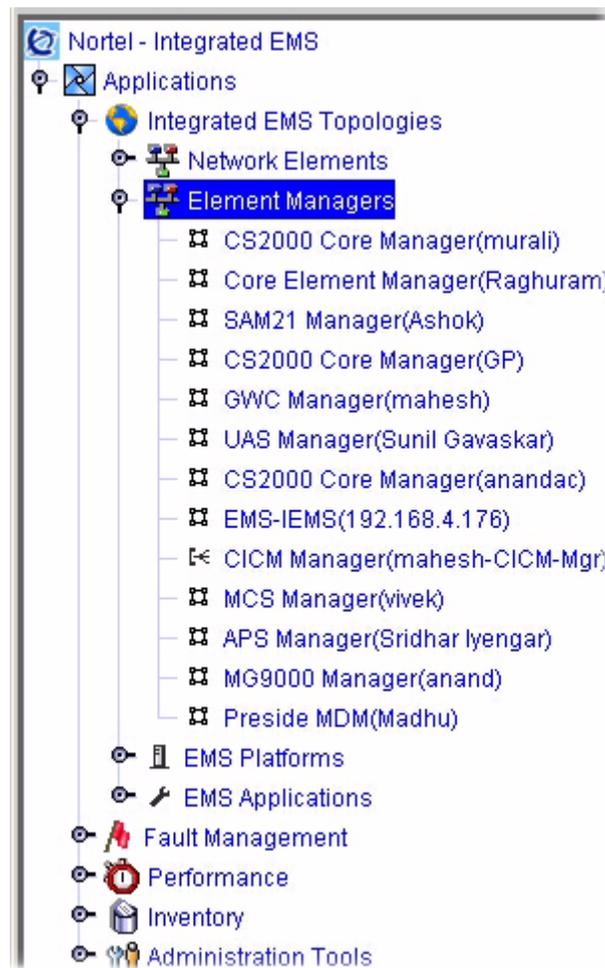
- [Working with IEMS topologies in the Java Web Start client](#)
 - [Adding objects to topology](#)
 - [Editing properties of objects](#)
 - [Using the topology operations](#)
- [Working with inventory panel](#)
- [Working with topologies in Web Client](#)
- [Working with inventory in Web Client](#)

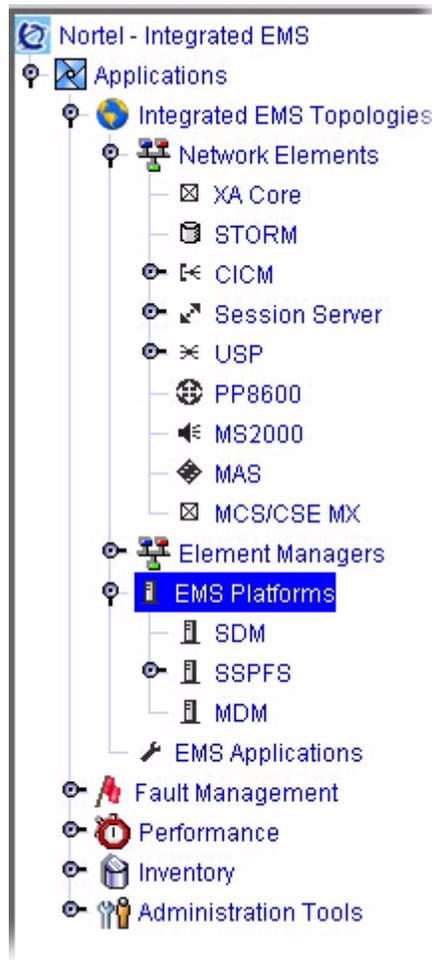
Working with IEMS topologies in the Java Web Start client

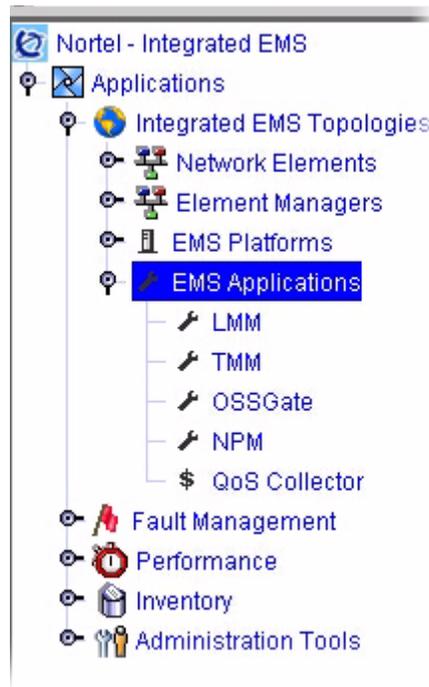
The topology provides a symbolic representation of the Element Management Systems (EMSs), Network Elements (NEs), platforms, and applications that are being managed by Integrated EMS. A topology node consists of one or more of the following objects:

- symbols that represent managed resources
- topology links that represent the connection between resources
- groups that represent a set of resources grouped logically
- containers that contain resources within them

The node named Integrated EMS Topologies can be found in the Integrated EMS tree as in the following figures:







The sub-sections covered in this section are listed below:

- [Adding objects to topology](#)
 - [Adding EMS platform](#)
 - [Adding element managers](#)
 - [Adding EMS applications](#)
 - [Adding network elements](#)
- [Editing properties of objects](#)
- [Using the topology operations](#)

Note: Do not specify the IP address in the client GUI or the command prompt UI, with an octet which is prefixed with a "zero". An IP address whose octet ranges from 0 to 255, when prefixed with zero, such as 010, is interpreted as an octal number and is passed as an "8", which results in an invalid IP address.

Identifying object map symbols

The various map symbols used in the topologies to represent the objects in Integrated EMS Client are tabulated below:

Identifying object map symbols

Map Symbol	Associated EMS/NE
Element managers	
	Audio Provisioning Server Manager (APS Manager)
	Communication Server 2000 Core Manager (CS 2000 Core Manager)
	Core Element Manager (CEM)
	Multimedia Communication Server 5200 Manager (MCS Manager)
	Fault and Performance Manager (FPM)

Identifying object map symbols

Map Symbol	Associated EMS/NE
	Communication Server 2000 Gateway Controller Manager (CS 2000 GWC Manager)
	Media Gateway 9000 Manager (MG 9000 Manager)
	Communication Server 2000 SAM21 Manager (CS 2000 SAM21 Manager)
	Universal Audio Server Manager (UAS Manager)
	Centrex IP Client Manager (CICM Manager)
	Integrated Element Management System (IEMS)

Identifying object map symbols

Map Symbol	Associated EMS/NE
	MCS system manager unit
	FPM (Fault and Performance Manager)
EMS applications	
	Audio Provisioning Server (APS)
	Line Maintenance Manager (LMM)
	Trunk Maintenance Manager (TMM)
	OSSGate

Identifying object map symbols

Map Symbol	Associated EMS/NE
	Network Patch Manager (NPM)
	QoS Collector Application (QCA)
	Synchronized Backup Restore Manager (SBRM)
EMS platforms	
	Server Platform Foundation Software (SPFS)
	Multi-Service Data Manager
	SuperNode Data Manager (SDM)

Identifying object map symbols

Map Symbol	Associated EMS/NE
NEs	
	Universal Signaling Point (USP)
	Passport 8600 (PP8600)
	Media Server 2000 (MS 2000)
	Storage Management (STORM)
	Media Application Server (MAS)
	Communication Server 2000 Core NE (CS 2000 Core NE) managed by CS 2000 Core Manager

Identifying object map symbols

Map Symbol	Associated EMS/NE
	Call Agent Core managed by CS 2000 Core Manager
	Call Agent Platform is subnode of Call Agent Core
	Multimedia Communication Server (MCS) NE managed by MCS Manager
	Virtual Switching Point (VSP) NE managed by Multi-Service Data Manager
	Multiservice Switch 15000 (MSS 15000) NE managed by Multi-Service Data Manager
	Multiservice Switch 7000 (MSS 7000) NE managed by Multi-Service Data Manager

Identifying object map symbols

Map Symbol	Associated EMS/NE
	Multiservice Switch 20000 (MSS 20000) managed by Multi-Service Data Manager
	Pocket Voice Gateway (PVG) managed by Multi-Service Data Manager
	Centrex IP Client Manager (CICM) NE managed by CICM Manager.
	RTP Media Portal NE

Objects supporting GUI application or Command Line application launch from topology

The following EMS platforms, element managers, EMS applications, and NEs supports launching of GUI applications from Integrated EMS Client:

- EMS platforms
 - SSPFS
- element managers
 - Audio Provisioning Server Manager
 - CS 2000 Manager
 - MCS Manager
 - Fault and Performance Manager

- CEM Manager
- GWC Manager
- MG 9000 Manager
- Multi-Service Data Manager
- SAM21 Manager
- Universal Audio Server
- CICM Manager
- EMS applications
 - APS application
 - Line Maintenance Manager
 - Trunk Maintenance Manager
 - Network Patch Manager
 - Audio Provisioning Server
 - OSSGate
- NEs
 - Universal Signaling Point
 - STORM
 - GWC
 - MCS
 - Passport 8600
 - MS 2000
 - SAM21
 - CS 2000 Core
 - Session Server
 - MAS
 - CICM (in CICM Card View)

The following EMS platforms, element managers, EMS applications, and NEs supports launching of Command Line interface from Integrated EMS Client:

- EMS platforms
 - MDM
 - SSPFS
 - SDM
- element managers
 - Multi-Service Data Manager
 - CICM Manager
 - MCS Manager
- EMS applications
 - QoS Collector Application
 - OSSGate
 - SBRM application
- NEs
 - Passport 8600
 - STORM
 - USP
 - MS 2000
 - Call Agent Core
 - Call Agent Platform
 - GWC
 - Universal Audio Server
 - Session Server
 - CS 2000 Core
 - MCS and Media Proxy
 - PVG 7480/15000 and MSS 15000
 - SAM21
 - UAS

The procedure to launch the applications from Integrated EMS is described and explained in "Launching Applications from Integrated EMS" of the *Integrated EMS Basics*, NN10329-111.

Adding objects to topology

This section describes adding a map symbol from your Integrated EMS Client. A map symbol can be associated with a managed object representing its status. Some objects can be automatically added to the Integrated EMS topology, while others have to be manually added. The following table details the mode of discovery for each object.

Mode of discovery of various EMS/NE

Object	Mode of Discovery
element managers	
Audio Provisioning Server Manager	Manually added
CS 2000 Core Manager	Manually added
MCS Manager manages MCS and Media Proxy NE	Manually added
Core Element Manager	Manually added
GWC Manager	Manually added
MG 9000 Manager	Manually added
Multi-Service Data Manager	Manually added
SAM21 Manager	Manually added
UAS Manager	Manually added
CICM Manager	Manually added
EMS applications	
Line Maintenance Manager	Manually added
Trunk Maintenance Manager	Manually added
OSSGate Application	Manually added
Network Patch Manager	Manually added
QoS Collector Application	Manually added
Audio Provisioning Server	Automatic discovery

Mode of discovery of various EMS/NE

Object	Mode of Discovery
EMS platform	
SSPFS	Manually added
MDM	Manually added
SDM	Automatic discovery
NEs	
Universal Signaling Point	Manually added
Passport 8600 NE	Manually added
STORM	Manually added
Media Server 2000	Manually added
Media Application Server	Manually added
Session Server	Manually added
CICM NE managed by CICM Manager	Manually added
CS 2000 Core NE managed by CS 2000 Core Manager	Automatic discovery
Call Agent Core managed by CS 2000 Core Manager	Automatic discovery
Call Agent Platform managed by CS 2000 Core Manager	Automatic discovery
MCS NE managed by MCS Manager	Automatic discovery
Media Proxy NE managed by MCS Manager	Automatic discovery
PVG 7480/15000 managed by Multi-Service Data Manager	Automatic discovery
Multiservice Switch 15000 (MS 15000) managed by Multi-Service Data Manager	Automatic discovery
GWC NE managed by GWC Manager	Automatic discovery
MG 9000 NE managed by MG 9000 Manager	Automatic discovery

Mode of discovery of various EMS/NE

Object	Mode of Discovery
SAM21 NE managed by SAM21 Manager	Automatic discovery
UAS NE managed by UAS Manager	Automatic discovery
CICM SAM21 card view	Automatic discovery
MTX NE managed by CEM Manager	Automatic discovery
MSC NE managed by CEM Manager	Automatic discovery
HLR NE managed by CEM Manager	Automatic discovery
TRI NE managed by CEM Manager	Automatic discovery

To add a map symbol in Integrated EMS Client, follow these steps:

1. Launch the Add EMS/NE wizard using the menu command **Tools-->Add--><Object to be added>**, where <Object to be added> can be an EMS platform, EMS/NE, or Application.
2. Enter the details of the object added.
3. Click the **Next** button.
4. Enter the fault interface details if any.
5. Click the **Next** button.
6. Enter the performance interface details if any.
7. Click the **Finish** button.

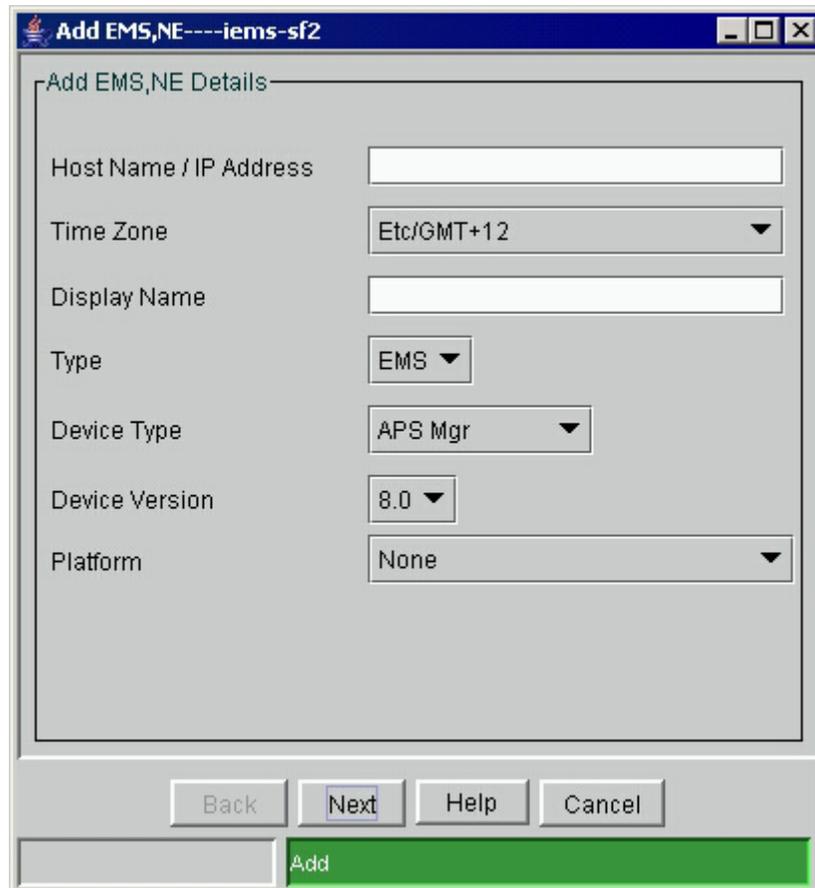
Invoking Add Object Wizard

The Add Object Wizard can be launched using any of the methods in the following table:

Various Methods to Invoke EMS/NE Wizard

Managed Object to be Added	From Menu Bar	Shortcut Key
element managers or NEs	Tools-->Add-->EMS/NE	Ctrl+Shift+E
EMS applications	Tools-->Add-->Application	Ctrl+Shift+A
EMS platforms	Tools-->Add-->Platform	Ctrl+Shift+P

The following figure shows a **Add EMS/NE** wizard launched using the Tools-->Add-->EMS/NE menu command.



Providing the object details

The add object wizard allows the addition of EMS platform, element manager, EMS application, or an NE to the Integrated EMS topology. The following listing provides a description of the required fields that need to be entered.

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.

Field	Description
Display Name	Enter the display name to be displayed in the topology for the map symbol.
Type	Select the type of object to be added to database from the list box.

Click the **Next** button to proceed to the Fault Interface details screen.

Providing the fault interface details

After providing the object details, the Fault Interface details associated with the object must be provided. If the message stating "No Fault Interface" is displayed, proceed to next step.

Note: The fields in the Details panel change according to the selected object (element manager, EMS, platform, or NE).

Providing the performance interface details

The Performance Interface details associated with the object must be provided in the Performance Details of the wizard. If the message stating "No Performance Interface" is displayed, proceed to next step.

Note: The fields in the Performance Interface screen change according to the selected object (element manager, EMS, platform or NE).

Click the **Finish** button to add the required object to the Integrated EMS topology. If successful, the following message is shown in the status bar of the wizard:



If the object host DNS is not resolved, the object is added to the topology with the provided details, and the status bar shows the following message:



If the object is not added in the topology, the status bar of the wizard shows the following message:



If the host name or IP address specified in the Host Name/IP Address field is invalid, the status bar of the wizard shows the following message:



Note 1: The added object name and its IP address can be viewed in the log messages displayed in the Security Log window invoked through the **Tools** menu command.

Note 2: If the map symbols are disturbed or moved in the topology panel, then the objects are added to the same topology panel. The added map symbols can overlap with existing map symbols, hence to rearrange the map symbols properly, select the **View-->Refresh** menu command.

Adding EMS platform

The Nortel Networks element management systems are deployed in a Nortel Networks platform. Integrated EMS provides an interface to provision and manage these platforms. This section provides the procedures to add these platforms to the Integrated EMS topology. The platforms that can be managed by Integrated EMS are listed below:

- SSPFS
- MDM
- SDM

Note: The SDM platforms are automatically discovered by Integrated EMS and added to the topology. The discovered SDM platform map symbols can be viewed under the **EMS Platforms** topology node in the Integrated EMS tree.

Adding an Succession Server Platform Foundation Software (SSPFS Platform)

The SSPFS platform is the run-time environment for various Nortel Networks EMSs and applications. This section describes how to add the SSPFS platform to the topology.

The following list provides the operations available for the SSPFS platform in Integrated EMS.

Tasks Supported in Integrated EMS for the SSPFS platform

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No
Launching corresponding applications	Yes	No

Tasks Supported in Integrated EMS for the SSPFS platform

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Security		
Centralized authentication and authorization (RADIUS client)	Yes (for version 7.0 and 8.0)	No
Other operations		
Launching corresponding applications	Yes	No

To add the SSPFS platform to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->Platform** menu command to invoke the Add Platform wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add Platform Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the platform. In HA (High Availability) configuration, this is the primary IP.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "SSPFS" from the **Device Type** list box.
- 5 Select the mode from the **Mode** list box. If "Simplex" item is selected from Mode list box, perform sub-step [step 5a](#) and proceed to [step 6](#). If "Duplex" item is selected from the Mode list box, follow these steps:

- a Enter the IP address of the active unit in the **Unit 0** field.
 - b Enter the IP address of the inactive unit in the **Unit 1** field.
- 6** Select the version of the device from the **Device Version** list box.

If selected device version is	Do
6.2	follow step 7 , step 8 , and step 18
7.0	go to step 9
8.0	go to step 9

- 7** Click the **Next** button.
- A list of fields displaying the location of various log files, such as Customer Log File, Audit Log File, and Security Log File is displayed.*
- 8** Click the **Next** button.
- "No Performance Interface" message is displayed.*
- 9** Check the **RADIUS Secret** field to enable the RADIUS secret password and enter RADIUS secret password in the **RADIUS Secret** field.
- Note:** If the **RADIUS Secret** field is checked and the password is not entered, the wizard displays "Enter the radius secret" error.
- 10** Click the **Next** button.
- 11** Enter the port value "2222" (in which the SSPFS communicates with Integrated EMS) in the **Port** field.
- 12** Enter the community in the **Community** field.
- 13** Select the SNMP version "v2c" from the **Version** list box.
- 14** Click the **Next** button.
- 15** Enter the port value "1161" in the **Port** field.
- 16** Enter the community in the **Community** field.
- 17** Select the SNMP version "v1" from the **Version** list box.
- 18** Click the **Finish** button to add the SSPFS platform.
- Once the SSPFS platform is added, a message appears in the status bar of the wizard is shown as in the following screen shot:*

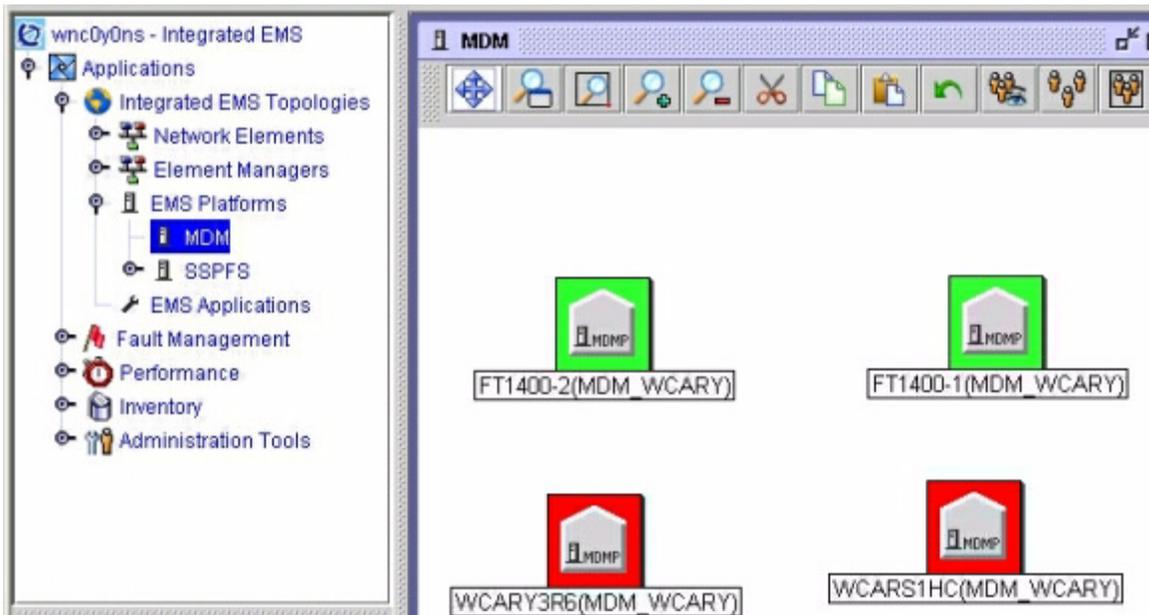


The SSPFS platform with the specified name is added as map symbol to the **EMS Platforms** topology panel. It is also added to the **SSPFS** topology under the **EMS Platforms** topology node in Integrated EMS tree.

Note: Integrated EMS correlates events received only from the SSPFS SNMP interface. The non-SNMP interfaces such as SYSLOG must be disabled using the "disable local logging" option from CLI. For details, refer to "Disabling local logging of SSPFS platform faults" section of *ATM/IP Solution-level Fault Management*, NN10408-900.

Adding an Multi-Service Data Manager platform (MDM platform)

The Multi-Service Data Manager platform is the runtime environment for various Nortel Networks EMSs and applications. Integrated EMS adds the Multi-Service Data Manager (MDM) platform 8.0 automatically when adding the MDM 8.0 to the Integrated EMS topology. The corresponding MDM platform is automatically discovered and added under the **MDM** topology (present under **Platforms** topology in the Integrated EMS tree) as in the following figure:



This procedure describes how to add the MDM platform version 6.2 and 7.0 to the topology. The following list provides the operations available for MDM platform in Integrated EMS.

Tasks Supported in Integrated EMS for the MDM platform

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No

Tasks Supported in Integrated EMS for the MDM platform

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events	Yes (only for version 8.0)	Yes (only for version 8.0)
Clearing alarms	Yes (only for version 8.0)	Yes (only for version 8.0)
Deleting alarms	Yes (only for version 8.0)	Yes (only for version 8.0)
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the MDM platform to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).

- 2 Select the **Tools-->Add-->Platform** menu command to invoke the Add Platform wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add Platform Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the platform.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "MDM" from the Device Type list box.
- 5 Select the version of the device from the **Device Version** list box.
- 6 Click the **Next** button.
A "No Fault Interface" message is displayed.
- 7 Click the **Next** button.
A "No Performance Interface" message is displayed.
- 8 Click the **Finish** button to add the MDM platform.
Once the MDM platform is added, a message in the status bar of the wizard is shown as in the following screen shot:



The MDM platform with the specified name is added as a map symbol to the **EMS Platforms** topology panel. It is also added to the **MDM** topology under the **EMS Platforms** topology node in the Integrated EMS tree.

Adding an SuperNode Data Manager platform (SDM platform)

Integrated EMS adds the SuperNode Data Manager (SDM) platforms are added automatically when adding the CS 2000 Manager (with platform as SDM) to the Integrated EMS topology. The SuperNode Data Manager (SDM) platforms added as map symbols in **EMS Platforms** topology panel and in the **SDM** topology under the **EMS Platforms** topology node of Integrated EMS tree.

The following list provides the operations available for SDM platform in Integrated EMS.

Tasks Supported in Integrated EMS for the SDM platform

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No

Tasks Supported in Integrated EMS for the SDM platform

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Security		
Centralized authentication and authorization (RADIUS client)	Yes (only for version 8.0)	No
Other operations		
Launching corresponding applications	Yes	No

Adding element managers

Integrated EMS provides an integration point for the various element managers. It allows a centralized point, to launch the various element managers and the ability to view the faults from these systems in a common graphical interface. This section describes the procedures to add various element managers listed below:

- [Adding an Audio Provisioning Server Manager \(APS Manager\)](#)
- [Adding a Communication Server 2000 Core Manager \(CS 2000 Core Manager\)](#)
- [Adding a Core Element Manager \(CEM\)](#)
- [Adding a Multimedia Communication Server Manager \(MCS Manager\)](#)
- [Adding a Fault and Performance Manager \(FPM\)](#)
- [Adding a Gateway Controller Manager \(GWC Manager\)](#)
- [Adding a Multi-Service Gateway 9000 Manager \(MG 9000 Manager\)](#)
- [Adding a Multi-Service Data Manager \(MDM\)](#)
- [Adding an SAM21 Manager](#)
- [Adding an Universal Audio Server Manager \(UAS Manager\)](#)
- [Adding a Centrex IP Client Manager \(CICM Manager\)](#)

Note 1: When the above element managers are added to the Integrated EMS topology, the NEs managed by these element managers are discovered automatically and added to the Integrated EMS topology.

Note 2: Integrated EMS support dynamic updates for some of the element managers. Integrated EMS topology is updated based on the objects managed by the corresponding element managers. Integrated EMS supports dynamic topology updates for following element managers:

- Audio Provisioning Server Manager
- Universal Audio Server Manager
- GWC Manager

Note 3: Do not specify the IP address in the client GUI or the command prompt UI, with an octet which is prefixed with a "zero". An IP address whose octet ranges from 0 to 255, when prefixed with

zero, such as 010, is interpreted as an octal number and is passed as an "8", which results in an invalid IP address.

Adding an Audio Provisioning Server Manager (APS Manager)

The Audio Provisioning Server (APS) is used to provision the encoded mu-law and a-law announcements that the UAS network element plays. Upon provisioning, the APS Manager Integrated EMS discovers the APS applications configured in the CMT server. After an APS Manager is added to the Integrated EMS topology, the corresponding APS application is discovered and added under the **EMS Applications** topology. This procedure describes how to add the APS Manager to the Integrated EMS topology.

The following list provides the operations available for APS Manager in Integrated EMS.

Tasks Supported in Integrated EMS for APS Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No

Tasks Supported in Integrated EMS for APS Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the APS Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the Add EMS/NE wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager. Note: The IP address must be the primary IP address of the CMT platform.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "APS Mgr" from the **Device Type** list box.

- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Click the **Next** button.
The channel name and the administrator name are displayed in various fields.
- 9 Click the **Next** button.
"No Performance Interface" message is displayed.
- 10 Click the **Finish** button to add the APS Manager.
Once the APS Manager is added, a message in the status bar of the wizard is shown as in the following screen shot:



The APS Manager with the specified name is added as map symbol to the **Element Managers** topology panel. In addition, a topology node named APS Manager with the specified display name in brackets is added under the **Element Managers** topology node in Integrated EMS tree. Also, Integrated EMS automatically discovers the APS application of the corresponding APS Manager (which is added) and added as map symbol under the **EMS Applications** topology.

The APS Manager can be added using Integrated EMS Web Client. For details, refer to [Adding an APS Manager](#) procedure.

Adding a Communication Server 2000 Core Manager (CS 2000 Core Manager)

CS 2000 Core Manager is also known as CS2K Manager since 2K stands for 2000. CS 2000 Core Manager manages CS 2000 Core and Call Agent Core NEs. When the Call Agent Core NE is added, the corresponding Call Agent platform is discovered automatically. In addition, the Call Agent Core NE node is added in **Call Agent Core** topology node under the **Networks Elements** node in the Integrated EMS tree. The Call Agent platform is added in the Call Agent Platform topology node (under the **Networks Elements-->Call Agent Core** node) in the Integrated EMS tree.

Note 1: While configuring the CS 2000 Core Manager logroute, ensure the following:

- Logroute on the associated SDM must be configured for TCPIN.
- Logroute on the associated SDM must be configured with ECOPE set to OFF.
- Logroute on a CS 2000 Core Manager with a pre SDM20 software load version: the associated SDM log format must be set to STD or SCC2.
- Logroute on a CS 2000 Core Manager with a SDM20 or greater software load version: the associated SDM log format must be set to STD_OLD or SCC2_OLD.

Note 2: The end of log format for the NTSTD and SCC2 feeds can be configured in Integrated EMS by modifying the MLDefaultParams.xml file under the /opt/nortel/iems/current/conf folder. The SCC2 end of log format is specified in "SCC2_MESSAGE ENDOFLOG" parameter and NTSTD end of log format is specified in "NTSTD_MESSAGE ENDOFLOG" parameter. The end of log format must be using the X character format and be separated with colon (":"). The default end of log format values in MLDefaultParams.xml file are:

```
SCC2_MESSAGE ENDOFLOG="0A:0D:20:0A:0D"
```

```
NTSTD_MESSAGE ENDOFLOG="0A:19:0A:0D"
```

If the end of log format is changed in the MLDefaultParams.conf, the Integrated EMS Server requires restart to reflect the changes.

Note 3: Integrated EMS polls periodically to check the CS 2000 platform object status. If the data is not received between two status polls, Integrated EMS disconnects and reconnects the CS 2000 Core Manager. If the reconnect attempt throws an error, the CS 2000 Core Manager and its corresponding components turn to an unknown

object status in Integrated EMS. In other words, the map symbols of these objects will turn to a gray background. For details on color for various severity levels, refer to the table in the [Updating status of objects manually](#).

It is suggested that the polling interval for the CS 2000 Core Manager object in Integrated EMS retain (or be left near) the default value (300 seconds). Reducing this significantly can result in frequent and unnecessary attempts to reconnect to the CS 2000 Core Manager fault feed.

Note 4: All the events from the CS 2000 Core Manager are added as stateless events in Integrated EMS. These events are not correlated to alarms.

Note 5: The CS 2000 Core Manager residing on SSPFS platform is known as Core Billing Manager.

The following list provides the operations available for CS 2000 Core Manager in Integrated EMS.

Tasks Supported in Integrated EMS for CS 2000 Core Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events	Yes	Yes
Clearing alarms	No	No
Deleting alarms	No	No
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		

Tasks Supported in Integrated EMS for CS 2000 Core Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	Yes (only for version 8.0)	No
Other operations		
Launching corresponding applications	Yes	No

To add the CS 2000 Core Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke Add EMS/NE wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.

Description of fields in Add EMS/NE Wizard

Field	Description
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "CS2K Core Mgr" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.

If the selected device version is	Do
-----------------------------------	----

8.0	Go to step 7
-----	------------------------------

7.0	Go to step 8
-----	------------------------------

6.2	Go to step 8
-----	------------------------------

- 7 Check the **Radius Secret** field to enable the RADIUS secret password and enter RADIUS secret password in the **Radius Secret** field.

Note: If the **Radius Secret** field is checked and the password is not entered, the wizard displays "Enter the radius secret" error.

- 8 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.

Note: When the CS 2000 Core Manager version 7.0 is added with associated platform as "SSPFS", it implied that CS 2000 Core Manager is a Core Billing Manager (CBM).

- 9 Select the NE type "CS 2000 Core" or "Call Agent Core" from the **Managing NE Type** list box (By default, "CS 2000 Core" is selected in the list box). If "CS 2000 Core" is selected from the **Managing NE Type** list box, type the CS 2000 Core device IP address in the **CS 2000 Core IP Address** field. If "Call Agent Core" is selected from the **Managing NE Type** list box, follow these steps:
 - a Select the mode from the **Mode** list box. If "Duplex" item is selected, perform sub-step [b](#) and proceed to [step 10](#).

If the NE type "Call Agent Core" is selected from the **Managing NE Type** list box, the Call Agent Core NE is discovered and the corresponding Call Agent platform is discovered automatically and added. The Call Agent Core NE node is added in the **Call Agent Core** topology node (under the **Networks Elements** node) in the Integrated EMS tree. The Call Agent platform is added in the Call Agent Platform topology node (under the **Networks Elements-->Call Agent Core** node) in the Integrated EMS tree.

The CS 2000 Manager can be added using Integrated EMS Web Client. For details, refer to [Adding an CS 2000 Core Manager](#) procedure.

Adding a Core Element Manager (CEM)

This procedure describes how to add the Core Element Manager (CEM Manager) to the Integrated EMS topology. When CEM is added to Integrated EMS topology, the MTX NE (Mobile Telephone Exchange NE), MSC NE (Mobile Switching Center NE), HLR NE (Home Location Register NE), and TRI NE are automatically discovered and added in the CEM topology node under the Networks Elements topology.

Note: The Core Element Manager is only supported in wireless markets and available with selected versions of Carrier VoIP platforms. Hence, Core Element Manager is available in selected sites of Carrier VoIP platforms.

The following list provides the operations available for CEM Manager in Integrated EMS.

Tasks Supported in Integrated EMS for CEM Manager

Task in Integrated EMS	Availability	
	Java Web Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	No	No

Tasks Supported in Integrated EMS for CEM Manager

Task in Integrated EMS	Availability	
	Java Web Client	Web Client
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the CEM Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the Add EMS/NE wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.

- 5 Select "CEM Mgr" from the **Device Type** list box.
- 6 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 7 Click the **Next** button.

Note: If CS 2000 Manager is already added in the Integrated EMS, the message as in the following screen shot is displayed. If you want to continue, click the **Yes** button.



The CEM Manager port is displayed in the CEM Port field.

- 8 Click the **Next** button.
A "No Performance Interface" message is displayed.
- 9 Click the **Finish** button to add the CEM Manager.
Once the CEM Manager is added, a message appears in the status bar of the wizard as in the following screen shot:



The CEM with the specified name is added as a map symbol to the **Element Managers** topology panel. In addition, a topology node named **Core Element Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree

The CEM can be added using Integrated EMS Web Client. For details, refer to [Adding an CEM](#) procedure.

Adding a Multimedia Communication Server Manager (MCS Manager)

MCS Manager manages MCS/CSE MX and Media Proxy NEs. When you add an MCS Manager, the MCS/CSE MX or Media Proxy NE is added as a map symbol under the **Network Elements** topology and **MCS/CSE** or **RTP Media Portal** topology (under Network Elements node). The MCS Manager is added as logical system manager server map symbol in the **Element Managers** topology. Also, the physical MCS system manager (SM) are added as map symbols in the MCS SM topology (with parent MCS Manager display name in brackets). This procedure describes how to add the MCS Manager to the Integrated EMS topology.

Note 1: When adding MCS Manager 7.0 in Integrated EMS, both the active and inactive MCS Managers must be added as separate objects in the Integrated EMS topology. The physical IP address of the active or inactive MCS Manager host must be entered in the **Host Name/IP Address** of Add EMS/NE wizard. If events are received from the MCS Manager with virtual IP address, they are correlated as events from unknown device.

Note 2: In the HA configuration, the standby MCS Manager is always in an "unknown" state and it raises the Unable To Communicate with Device alarm. This alarm cannot be cleared in Integrated EMS.

Note 3: The MCS system manager (MCS SM) is also known as MCS 5200 Manager.

Prerequisites: for Integrated EMS to receive MCS fault and performance data

MCS must be configured to send fault and performance data to Integrated EMS. Without this configuration, Integrated EMS receives no fault and performance data from Session Server NEs.

Prerequisites for launching MCS Client

MCS client launch is available only on a PC that has MCS software installed. For details of how to install the software, refer to *MCS System Management Console User Guide*, NN10247-111. MCS Client software can be launched only in Microsoft Windows platforms.

The requirements for launching the MCP Management Console from the MCS system manager are:

- The client workstation must have JRE 1.4.2_06 version installed in it.
- The MCP System Management Console can be launched only for Microsoft Windows platform-based client workstations.

Adding an MCS Manager using Java Web Start client

The following list provides the operations available for MCS Manager in Integrated EMS.

Tasks Supported in Integrated EMS for MCS Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No

Tasks Supported in Integrated EMS for MCS Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the MCS Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the **Add EMS/NE** dialog.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "MCS Mgr" from the **Device Type** list box.

- 6 Select the version of the device from the **Device Version** list box.

If the selected version is	Do
6.2	steps 9 to 15 and step 20
7.0	steps 9 to 20
8.0	steps 7 to 20

- 7 Enter the user name of the device in the **User Name** field.

- 8 Select the mode of the device from the **Mode** list box.

If "Duplex" mode is selected, enter the primary IP address and secondary IP address in the **Instance 0** and **Instance 1** fields respectively.

- 9 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.

- 10 Select the NE type "MCS/CSE MX" or "Media Proxy" from the **Managing NE** Type list box. By default, "MCS/CSE MX" is selected in the list box.

- 11 Click the **Next** button.

- 12 In the **Port** field, enter the port value (in which the EMS communicates with Integrated EMS).

- 13 Enter the community in the **Community** field.

- 14 Select the SNMP version "v2c" from the **Version** list box.

Note: The port value and the SNMP version are dependent on the MCS Manager configuration that is added.

- 15 Click the **Next** button.

- 16 In the **Directory Name** field, enter the directory name where the CSV file is present in the device.

For MCS Manager 8.0, wildcard support is available for this field. In general, the MCS System Manager operational measurement (OM) files resides in

"`/var/mcp/oss/om/MCP_4.0/<fault-performance manager instance ID>/<network element instance ID>/<file format option name>`" folder.

Example

"`/var/mcp/oss/om/MCP_4.0/SM_0/*/csv/`" where * is a wildcard representing "network element instance ID".

If the MCS System Manager is in duplex mode, then, the performance data collection jobs should continue and the OM files should be collected from the currently active physical unit IP. The OM directory path for the two physical units are different and hence when a SWACT takes place in the MCS System Manager host, the directory from which the OM files should be collected will differ. As only one path can be given when configuring the MCS System Manager, the wildcard * can be used when specifying the directory path so that the different directory paths in the units are handled. This way, collection of the OM files can happen even after a SWACT had taken place.

Example

“/var/mcp/oss/om/MCP_4.0/FPM1_*/*/csv-file”

- 17 In the **File Name** field, enter the file mask of the CSV file present in the device.

Wildcard support is available for this field.

Example

If the file names start with "CSVOM" string, you can enter the value "CSVOM*.csv".

- 18 Enter the user name for FTP account in the **User ID** field.
- 19 Enter the corresponding password for FTP account in the **Password** field.
- 20 Click the **Finish** button to add the MCS Manager.

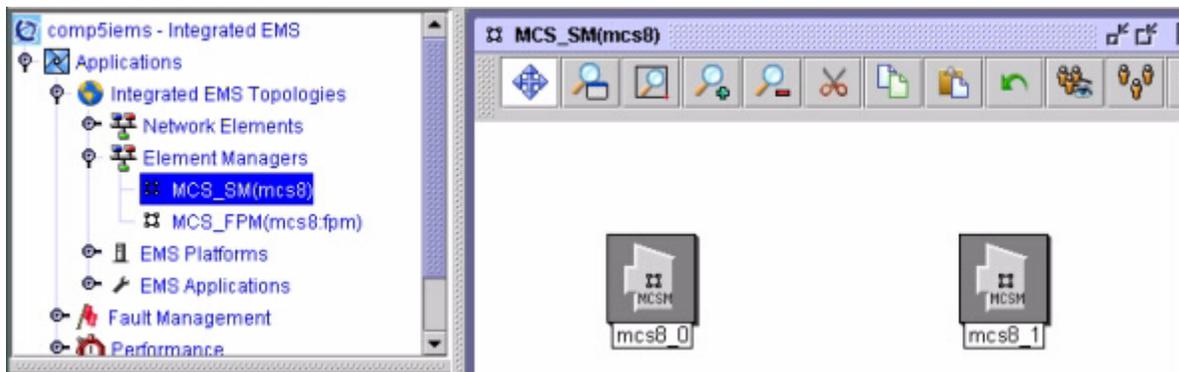
Once the MCS Manager is added, a message appears in the status bar of the wizard as in the following screen shot:



Note: After adding an MCS Manager version 8.0, the fault interface and performance details are associated to corresponding physical SM servers that are added in the MCS SM(XXX) node (MCS SM node with the parent MCS Manager display name) under the Element Managers topology. Hence the fault interface and performance details cannot be modified for MCS Manager map symbol in the **Element Managers** topology. It can be modified only for corresponding physical SM server in MCS SM(XXX) node.

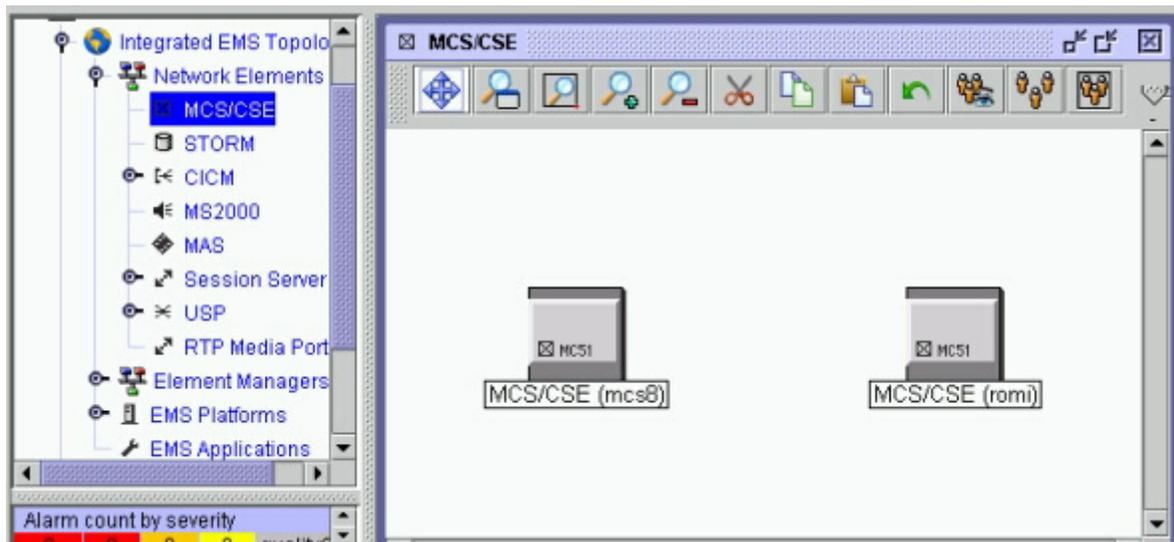
The MCS Manager 8.0 with the specified name is added as a logical SM server map symbol to the **Element Managers** topology panel. The

MCS SM (with the specified display name in brackets) is added under the **Element Managers** topology node of the Integrated EMS tree. The physical MCS SM server are added as map symbols in the topology node named **MCS SM(XXX)** (with the specified display name in brackets). When adding a MCS Manager 8.0 in duplex mode, the primary and secondary physical SM servers are added as map symbol in the **MCS SM(XXX)** node present under the **Element Managers** topology node of the Integrated EMS tree similar to the following screen shot.



Note: The primary and secondary physical SM server map symbols display names are "<MCS Manager display name>_0" and "<MCS Manager display name>_1" respectively (similar to the preceding screen shot).

The MCS (or MCS/CSE) NE or Media Proxy NE added under the **Network Elements** node and **MCS/CSE** or **RTP Media Portal** node has the display name appended with the parent MCS Manager display name in brackets similar to the following screen shot:



This also applies to the Web Client.

The MCS Manager can be added using Integrated EMS Web Client. For details, refer to "[Adding an MCS Manager](#)".

Adding a Fault and Performance Manager (FPM)

This procedure describes how to add the Fault and Performance Manager (FPM) to the Integrated EMS topology.

Prerequisites for adding FPM

To add an FPM, the corresponding MCS Manager must be added to the Integrated EMS topology.

Adding an FPM using Java Web Start client

The following list provides the operations available for FPM in Integrated EMS.

Tasks Supported in Integrated EMS for FPM

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No

Tasks Supported in Integrated EMS for FPM

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the FPM to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the **Add EMS/NE** dialog.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "FPM Mgr" from the **Device Type** list box.
- 6 Retain the version "8.0" in the **Device Version** list box.

- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 From the **MCS Managers** list box, select the MCS Manager to which the FPM corresponds.
- 9 Select the mode of the device from the **Mode** list box.
If "Duplex" mode is selected, enter the primary IP address and secondary IP address in the **Instance 0** and **Instance 1** fields respectively.
- 10 Enter the user name of the device in the **User Name** field.
- 11 Click the **Next** button.
- 12 Enter the port value "12517" (in which the EMS communicates with Integrated EMS) in the **Port** field.
- 13 Enter the community in the **Community** field.
- 14 Select the SNMP version "v2c" from the **Version** list box.
Note: The port value and SNMP version are dependent on the FPM configuration which is added.
- 15 Click the **Next** button.
- 16 In the **Directory Name** field, enter the directory name where the CSV file is present in the device.

Wildcard support is available for this field. In general, the FPM operational measurement (OM) files resides in
"/var/mcp/oss/om/MCP_4.0/<fault-performance manager instance id>/<network element instance id>/<file format option name>" folder.

Example

"/var/mcp/oss/om/MCP_4.0/FPM1_0/*/csv-file" where * is a wildcard representing "network element instance ID".

If the FPM is in duplex mode, then, the performance data collection jobs should continue and the OM files should be collected from the currently active physical unit IP. The OM directory path for the two physical units are different and hence when a SWACT takes place in the FPM host, the directory from which the OM files should be collected will differ. As only one path can be given when configuring the FPM, the wildcard * can be used when specifying the directory path so that the different directory paths in the units are handled. This way, collection of the OM files can happen even after a SWACT had taken place.

Example

"/var/mcp/oss/om/MCP_4.0/FPM1_*/*/csv-file"

- 17 In the **File Name** field, enter the file mask of the CSV file present in the device.

Wildcard support is available for this field.

Example

If the file names start with "CSVOM" string, you can enter the value "CSVOM*.csv".

- 18 Enter the user name for FTP account in the **User ID** field.
- 19 Enter the corresponding password for FTP account in the **Password** field.
- 20 Click the **Finish** button to add the FPM.

Once the FPM is added, a message appears in the status bar of the wizard as in the following screen shot:



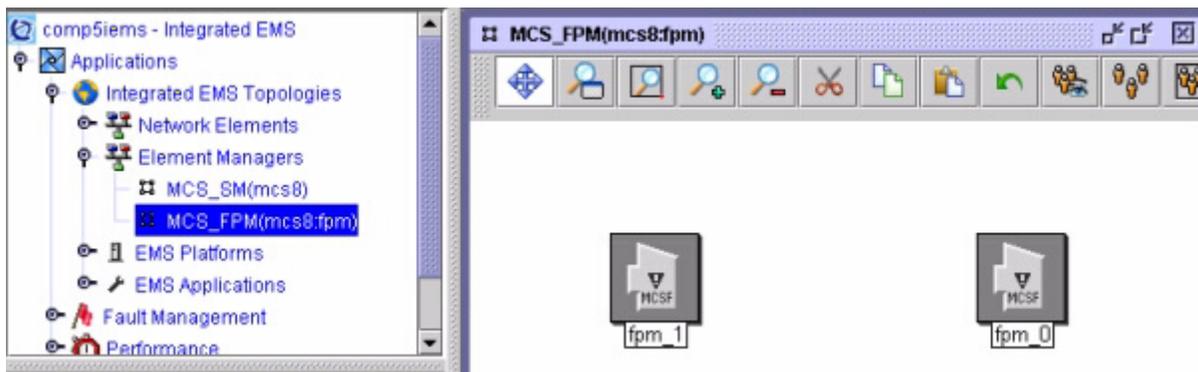
The FPM with the specified display name is added as a map symbol to the **Element Managers** topology panel.

A topology node named **MCS_FPM** with the parent MCS and FPM display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree. If the duplex mode is selected while adding the FPM, you can find the primary and secondary units added in this MCS_FPM(<MCS display name>:<FPM display name>) node similar to the following figure.

Example

mcs8:fpm as in the following figure.

This also applies to the Web Client.



The FPM can be added using Integrated EMS Web Client. For details, refer to "[Adding an FPM](#)".

Adding a Gateway Controller Manager (GWC Manager)

Gateway Controller (GWC) Manager manages GWC NEs. This procedure describes how to add the GWC Manager to the topology. After an GWC Manager is added to the Integrated EMS topology, the respective NEs managed by that GWC Manager are discovered automatically and added under the **Network Elements** topology.

The following list provides the operations available for GWC Manager in Integrated EMS.

Tasks Supported in Integrated EMS for GWC Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		

Tasks Supported in Integrated EMS for GWC Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the GWC Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the Add EMS/NE wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "GWC Mgr" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.

- 8 Click the **Next** button.
The channel name and the administrator name are displayed in various fields.
- 9 Click the **Next** button.
A "No Performance Interface" message is displayed.
Note: The performance interface details for GWC NEs are taken by default in Integrated EMS. The default values are listed below:
 - SNMP version = v2c
 - SNMP community = public
 - SNMP port = 161
- 10 Click the **Finish** button to add the GWC Manager.
Once the GWC Manager is added, a message appears in the status bar of the wizard as in the following screen shot:



The GWC Manager with the specified name is added as a map symbol to the **Element Managers** topology panel. In addition, a topology node named **GWC Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.

The GWC Manager can be added using Integrated EMS Web Client. For details, refer to [Adding an GWC Manager](#) procedure.

Adding a Multi-Service Gateway 9000 Manager (MG 9000 Manager)

Multi-Service Gateway 9000 (MG 9000) Manager manages MG 9000 NEs. This procedure describes how to add the MG 9000 Manager. After adding an MG 9000 Manager to the Integrated EMS topology, the NEs managed by the corresponding MG 9000 Manager are automatically discovered and added under the **Network Elements** topology.

The following list provides the operations available for MG 9000 Manager in Integrated EMS.

Tasks Supported in Integrated EMS for MG 9000 Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		

Tasks Supported in Integrated EMS for MG 9000 Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Centralized authentication and authorization (RADIUS client)	Yes (for version 7.0 and 8.0)	No
Other operations		
Launching corresponding applications	Yes	No

To add the MG 9000 Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tool-->Add-->EMS/NE** menu command to invoke the Add EMS/NE wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "MG9K Mgr" from the **Device Type** list box.
- 6 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.

- 7 Select the version of the device from the **Device Version** list box.

If the device version is	Do
6.2	follow step 8 to step 11 and step 14
7.0	follow step 8 to step 11 and step 14
8.0	go to step 8

- 8 Enter the valid IP address in **MG9K Mid Tier IP** field. The IP address of the Mid Tier existing between Integrated EMS and MG 9000 Manager must be provided here.

- 9 Click the **Next** button.

The channel name and the administrator name are displayed in various fields.

- 10 Enter the valid subnet value with version in the **Subnet (with version)** field as in the following table:

Subnet Value for MG 9000 Manager in Various Version of Carrier VoIP

MG 9000 Manager at Version	Subnet Value
SN06.2	Subnet_062
SN07	Subnet_7
SN08	Subnet_7

- 11 Click the **Next** button.

For device version 6.2 or 7.0, a "No Performance Interface" message is displayed.

- 12 Enter the user name for SFTP-PULL in the **User ID** field.

- 13 Enter the password in the **Password** field.

- 14 Click the **Finish** button to add the MG 9000 Manager.

Once the MG 9000 Manager is added, a message appears in the status bar of the wizard as in the following screen shot:



The MG 9000 Manager with the specified name is added as a map symbol to the **Element Managers** topology panel. In addition, a topology node named **MG 9000 Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.

The MG 9000 Manager can be added using Integrated EMS Web Client. For details, refer to [Adding an MG 9000 Manager](#) procedure.

Adding a Multi-Service Data Manager (MDM)

Multi-Service Data Manager (MDM) manages Packet Voice Gateway 7480/15000 (PVG 7480/15000) and Multiservice Switch 15000 NEs. This procedure describes how to add an MDM and to configure the MDM manager to enable communication using SSH (Secure Shell). In the SSH mode of communication, data transfer is secured as it is transmitted through the SSH tunnel.

When an MDM is added to the topology, the corresponding PVG 7480/15000 and MSS 15000 NEs are discovered by Integrated EMS and added under the **Network Elements** topology. For MDM 8.0, the corresponding MDM platforms are automatically discovered and added under the **MDM** topology (present under the **Platforms** topology in the Integrated EMS tree).

Requirements for launching MDM

The requirements for launching the MDM are as follows:

- MDM launch on a UNIX platform requires the user to log in to the MDM GUI Server UNIX shell. For details on how to launch the client GUI, refer to *MDM Installer Guide*, 241-6001-100.
- MDM launch on a PC requires a UNIX emulation package such as Exceed. For information on installing and configuring Exceed refer to Exceed documentation. For details of the specific command used to launch via Exceed, refer to *MDM Installer guide*, NN2416001-100 and *MDM Customization Administrator guide*, NN2416001-301.
- The X11 Client launch requires X server needs to be run in the client machine. In the case of Solaris/Linux, Xserver runs by default. In the case of Windows, Hummingbird or Exceed is used as Xserver.
- To launch MDM Manager or X11 Client, the client-server IP address must be provisioned. Refer to "Provisioning client-server IP address for MDM Manager" in Launching applications for MDM of *Integrated EMS Basics*, NN10329-111.

Adding MDM using Java Web Start Client

The following list provides the operations available for MDM in Integrated EMS.

Tasks Supported in Integrated EMS for MDM

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	Yes (only for version 8.0)	No
Other applications		
Launching corresponding applications	Yes	No

To add the MDM to the topology, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching the Integrated EMS Java Web Start Client" section of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command.

The Add EMS/NE wizard is launched similar to the following figure:

Add EMS,NE----nortel-sf2

Add EMS,NE Details

Host Name / IP Address:

Time Zone:

Display Name:

Type:

Device Type:

Device Version:

Mode:

Radius Secret:

Back Next Help Cancel

Add

Java Application Window

- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of Properties in Add EMS/NE Wizard

Property	Description
Host Name/IP Address	The field for the host name or IP address of the Element Manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "MDM" from the **Device Type** list box.
- 6 Select the version such as 8.0 of the device from the **Device Version** list box.

If version is	Do
6.2	follow step 8 to step 18 and step 21
7.0	follow step 8 to step 18 and step 21
8.0	follow step 7 to step 21

- 7 Check the **Radius Secret** field to enable the RADIUS secret password and enter RADIUS secret password in the **Radius Secret** field.

Note 1: If the **Radius Secret** field is checked and the password is not entered, the wizard displays "Enter the radius secret" error.

Note 2: For MDM 8.0, the RADIUS secret password must be enabled and entered before providing the user name and password in the Configure MDM Centralized Account screen. Changing the order of entering the RADIUS secret password and MDM Centralized account details results in improper function of the Centralized account.

- 8 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.

- 9 Select the manager unit mode from the **Mode** list box.

There are two modes to be selected based on whether the MDM application is to run in a simplex or duplex mode. In the simplex mode, MDM application is configured in one machine while in the duplex mode the application is configured to run in two machines. In the duplex mode, when the current machine is down, the Integrated EMS switches over to the alternate or secondary machine.

If Mode is	Do
Simplex	step 11
Duplex	step 10

- 10 In the **Inactive Unit IP** field, enter the secondary machine IP address in which the MDM application has to run.

Note: Do not specify the IP address with an octet, which is prefixed with a "zero". An IP address whose octet ranges from 0 to 255, when prefixed with zero, such as 010, is interpreted as an octal number and is passed as an "8", which results in an invalid IP address.

- 11 Click the **Next** button.

- 12 For MDM 8.0, configure the user name and password in the **Configure MDM Centralized Account** dialog as in the following figure for centralized account common to all MDM devices.

Note: The user name entered in Configure MDM Centralized Account dialog must be a user belonging to the "emsadm" group.



The screenshot shows a Java dialog box titled "Configure MDM Centralized Account". It contains two text input fields labeled "UserName" and "Password". At the bottom right, there are "OK" and "Cancel" buttons. The status bar at the bottom of the window reads "Java Application Window".

- 13** Click the **OK** button.
- The Fault Interface window is displayed.
- Note:** The centralized account screen is displayed only the first time an MDM device is added to the Integrated EMS.
- To change the centralized account user name and password at any time, follow these steps:*
- a** Select the required MDM 8.0 map symbol in the Integrated EMS display panel.
 - b** Right-click the map symbol and select the **Change MDM Centralized Account** menu item.
- The Configure MDM Centralized Account window is invoked.*
- c** If required, change the user name in the **UserName** field.
 - d** Change the password in the **Password** field.
 - e** Click the **OK** button.
- 14** In the **Port** field of the Primary panel, enter the port through which log messages are sent by the MDM element manager.
- 15** Enter the user identification in the **User ID** field of the Primary panel.

If Mode is	Do
Simplex	step 18
Duplex	step 16

- 16** In the **Port** field of the Secondary panel, enter the port through which log messages are sent by the MDM element manager.
- 17** Enter the user identification in the **User ID** field of the Secondary panel.
- 18** Click the **Next** button.
- The Performance Interface window is displayed.

Note: For the correct operation of the OM feed between the MDM and the IEMS, a Performance Measurement Stream Processor (PMSP) server must already be configured on the MDM workstation, and the 5-minute and 30-minute TCP port values on the MDM's PMSP server must match the 5-minute and 30-minute port value configured on the IEMS for the MDM. For more information on the PMSP, refer to section "Performance Measurement Stream Processor (PMSP)" of *Nortel Networks Multiservice Data Manager Server Reference*, 241-6001-310.

- 19 Enter the port number in the **Five Min Collection Port** field. The port configured in this field is scheduled to collect data every five minutes from the NEs managed by the MDM application. The port number must match the 5-minute TCP port number configured for the MDM's PMSP server. The default port is 1646.
- 20 Enter the port in the **Thirty Min Collection Port** field. The port configured in this field is scheduled to collect data every thirty minutes from the NEs managed by the MDM application. The port number must match the 30-minute TCP port number configured for the MDM's PMSP server. The default port is 1647.
- 21 Click the **Finish** button. This adds the MDM with the provided details.

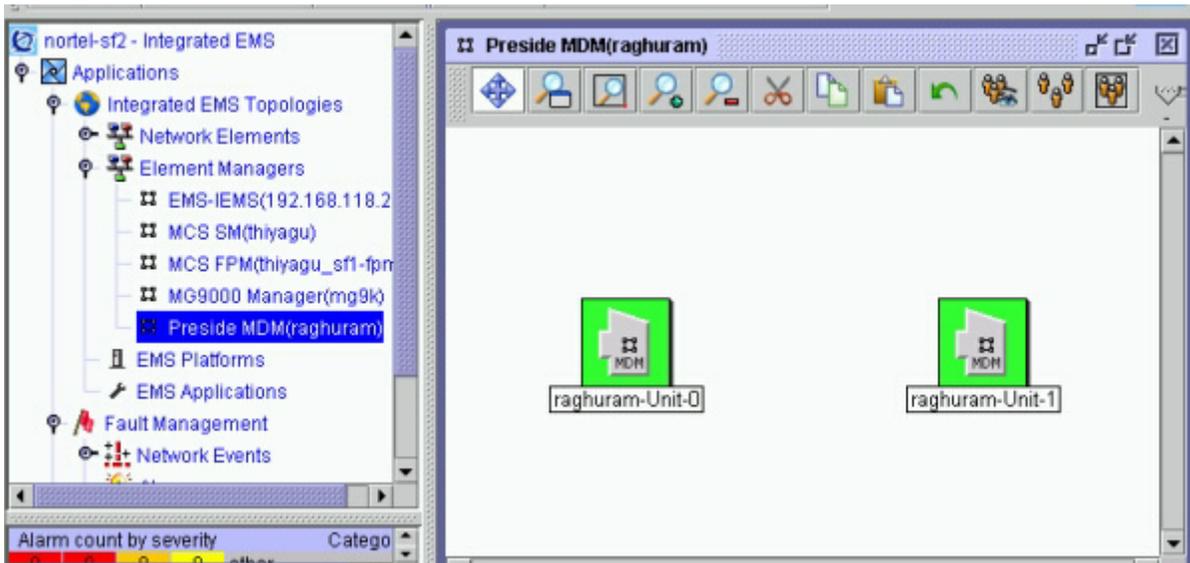
Once the MDM is added, a message appears in the status bar of the wizard as in the following screen shot:



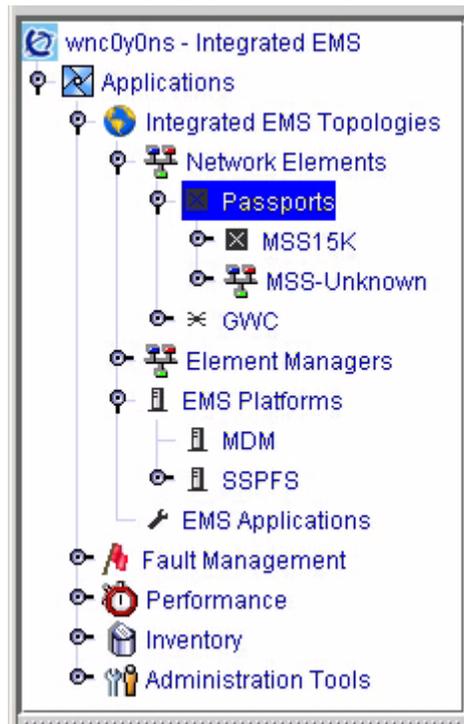
Note: After the MDM is added, provision the client-server IP address with the procedure explained in the "Launching applications for MDM" of the *Integrated EMS Basics*, NN10329-111.

The MDM with the specified name is added as a map symbol to the **Element Managers** topology. In addition, a topology node named **MDM** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.

If an MDM 8.0 is added in the duplex mode then, map symbols of both the primary and secondary units of the MDM are displayed in the corresponding MDM panel, which is displayed on selecting the MDM node under the **Element Managers** node (see the following screen shot). The added units can be identified by their display name appended with *Unit-0* for the primary unit and *Unit-1* for the secondary unit as in the following screen shot.

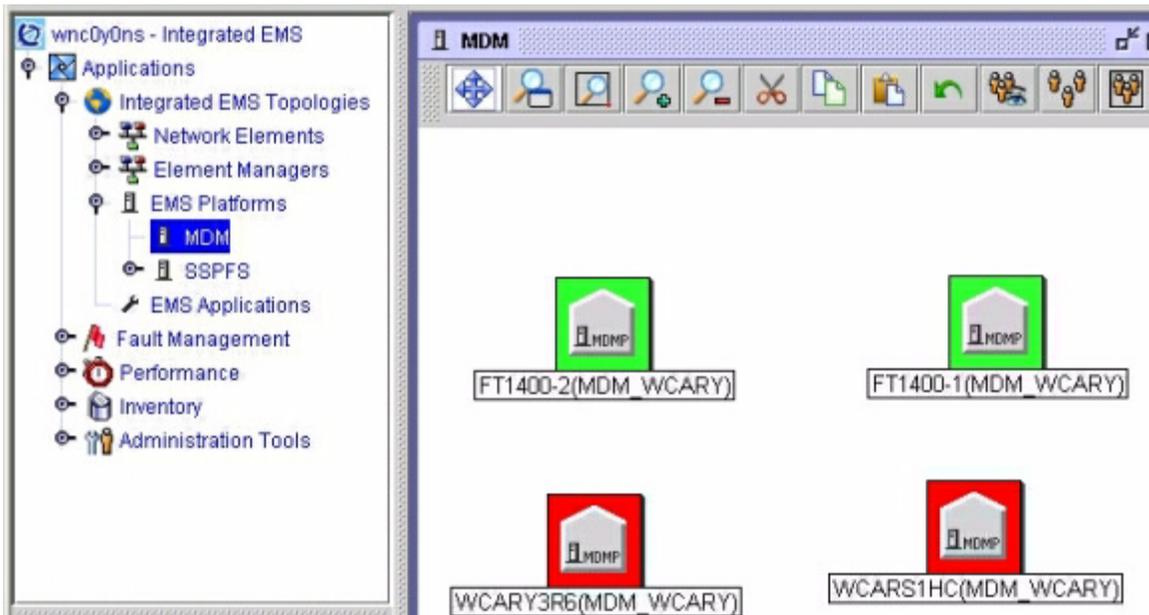


All the NEs managed by the added MDM application are added as map symbols in the **Passports** topology under the **Network Elements** topology node as shown in the following screen shot. Under the **Passports** topology, the MSS 15000 NEs are added in the **MSS15K** topology and MSS NEs unknown to MDM are added in the **MSS-Unknown** topology.



Note: For the NEs and MDM automatically discovered by MDM, the display name of the map symbol is appended with the parent MDM name in brackets.

When MDM 8.0 is added to the Integrated EMS topology, the corresponding MDM platforms automatically discovered and added under the **MDM** topology (present under the **Platforms** topology in the Integrated EMS tree) as shown in the following screen shot:



Adding an SAM21 Manager

SAM21 is the acronym for Services Application Module, 21 slot. SAM 21 Manager manages SAM21 NEs. This procedure describes how to add the SAM21 Manager to the Integrated EMS topology. After an SAM21 Manager is added to the Integrated EMS topology, the corresponding NEs managed by that SAM21 Manager are discovered automatically and added under the **Network Elements** topology. Also, the SAM21 Cards are discovered automatically and added under the corresponding SAM21NEs. Refer to the [Viewing the SAM21 Cards](#) procedure to view the SAM21 cards.

The following list provides the operations available for SAM21 Manager in Integrated EMS.

Tasks Supported in Integrated EMS for SAM21 Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	No	No
Report job	No	No

Tasks Supported in Integrated EMS for SAM21 Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Transfer job	No	No
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the SAM21 Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the Add EMS/NE wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "SAM21 Mgr" from the **Device Type** list box.

- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Click the **Next** button.

In the Syslog Details panel, a list of fields is displayed showing the location of various log files such as Customer Log File, Audit Log File, and Security Log File.

- 9 Click the **Next** button.

A "No Performance Interface" message is displayed.

Note: The performance interface details for SAM21 NEs are taken by default in Integrated EMS. The default values are listed below:

- SNMP version = v2c
- SNMP community = public
- SNMP port = 161

- 10 Click the **Finish** button to add the SAM21 Manager.

Once the SAM21 Manager is added, a message appears in the status bar of the wizard as in the following screen shot:



The SAM21 Manager with the specified name is added as a map symbol to the **Element Managers** topology panel. In addition, a topology node named **SAM21 Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.

The SAM21 Manager can be added using Integrated EMS Web Client. For details, refer to [Adding an SAM21 Manager](#) procedure.

Adding an Universal Audio Server Manager (UAS Manager)

Universal Audio Server (UAS) Manager manages UAS NEs. This procedure describes how to add the UAS Manager to the topology. After an UAS Manager is added to the Integrated EMS topology, the respective NEs managed by that UAS Manager are discovered automatically and added under the **Network Elements** topology.

The following list provides the operations available for UAS Manager in Integrated EMS.

Tasks Supported in Integrated EMS for UAS Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		

Tasks Supported in Integrated EMS for UAS Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the UAS Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the Add EMS/NE dialog.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "UAS Mgr" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform

- 8 Click the **Next** button.
The channel name and the administrator name are displayed in various fields.
- 9 Click the **Next** button.
A "No Performance Interface" message is displayed.
Note: The performance interface details for UAS NEs are taken by default in Integrated EMS. The default values are listed below:
 - SNMP version = v3
 - User name = v3admin
 - Security level = noAuthnoPriv
- 10 Click the **Finish** button to add the UAS Manager.
Once the UAS Manager is added, a message appears in the status bar of the wizard as in the following screen shot:



The UAS Manager with the specified name is added as a map symbol to the **Element Managers** topology panel. In addition, a topology node named **UAS Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.

The UAS Manager can be added using Integrated EMS Web Client. For details, refer to [Adding an UAS Manager](#) procedure.

Adding a Centrex IP Client Manager (CICM Manager)

Centrex IP Client Manager (CICM) manages CICM NEs. This procedure describes how to add the CICM Manager using Integrated EMS Java Web Start Client.

Note: Only a single pair of CICM Manager must be added per Carrier VoIP network.

Required prerequisites for Integrated EMS to receive CICM fault and performance data

CICM Manager must be configured to send fault data to Integrated EMS. The CICM has a script called **snmpri_configure** which is used to configure the CICM with Integrated EMS server virtual IP address and port for sending the fault data to Integrated EMS; without this configuration, Integrated EMS receives no faults from CICM.

Required prerequisites for launching CICM Manager

The prerequisites for launching the CICM Manager are:

- CICM Manager has to be configured using **SSPFS CLI** tool for launching CICM Manager from Integrated EMS Client. For details, refer to *ATM/IP Solution-level Configuration Management*, NN10409-500.
- CICM Manager can be launched only in Microsoft Windows with default browser configured as Microsoft Internet Explorer.

Adding CICM Manager using Java Web Start client

The following list provides the operations available for CICM Manager in Integrated EMS.

Tasks Supported in Integrated EMS for CICM Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes

Tasks Supported in Integrated EMS for CICM Manager

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

To add the CICM Manager to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the Add EMS/NE wizard.

- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Note: The host name of CICM Manager must be same as the host name of SAM21 Element Manager. If incorrect CICM Manager host name is entered, the client launch for CICM Manager is not launched.

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager. Note: In the Carrier VoIP platform HA configuration The host name or IP is the devices primary virtual host name or IP.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "EMS" from the **Type** list box.
- 5 Select "CICM Manager" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Select the manager unit mode from the **Mode** list box. If "Duplex" mode selected, follow these steps:

If mode selected is	Do
Simplex	follow step 11
Duplex	follow step 9

- 9 Enter the IP address of Card B host in the **Card B IP Address** field.
- 10 Enter the display name of Card B host in the **Card B Display Name** field.
- 11 Enter the card location in the **Card Location** field.

- 12 Enter the IP address of Card A host in the **Card A IP Address** field.
- 13 Follow the [step 15](#).
- 14 Enter the card location in the **Card Location** field.
- 15 Click the **Next** button.
- 16 Enter the port (in which the EMS communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 17 Enter the community in the **Community** field.
- 18 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context nameIf you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication ProtocolIf you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication Protocol
 - Privacy Password
- 19 Click the **Next** button.
- 20 Refer the [step 16](#) to [step 18](#).
- 21 Click the **Finish** button.

Once the CICM Manager is added, a message in the status bar of the wizard is shown as in the following screen shot:



The CICM Manager with the specified name is added as map symbol to the **Element Managers** topology panel. In addition, a topology node named **CICM Manager** with the specified display name in brackets is added under the **Element Managers** topology node in Integrated EMS tree.

The CICM Manager can be added using Integrated EMS Web Client. For details, refer to [Adding an CICM Manager](#) procedure.

Adding EMS applications

EMS applications manage elements in a network. The following sections describe the procedure describes how to add the EMS applications to the Integrated EMS topology:

- [Adding a Line Maintenance application \(LMM application\)](#)
- [Adding a Trunk Maintenance Manager application \(TMM application\)](#)
- [Adding an OSSGate application](#)
- [Adding a Network Patch Manager application \(NPM application\)](#)
- [Adding a QoS Collector application \(QCA\)](#)
- [Adding a Synchronized Backup Restore Manager application \(SBRM application\)](#)
- [Adding an Audio Provisioning Server application \(APS application\)](#)

Note: Do not specify the IP address in the client GUI or the command prompt UI, with an octet which is prefixed with a "zero". An IP address whose octet ranges from 0 to 255, when prefixed with zero, such as 010, is interpreted as an octal number and is passed as an "8", which results in an invalid IP address.

Adding a Line Maintenance application (LMM application)

The SSPFS platform is the parent platform for the Line Maintenance Manager (LMM). This procedure describes how to add the LMM application to the Integrated EMS topology. After a LMM application is added to the Integrated EMS topology, it is displayed as a map symbol in the **EMS Applications** topology panel and **LMM** topology panel (present under the **EMS Applications** node) in the Integrated EMS tree.

The following list provides the operations available for LMM application in Integrated EMS.

Tasks Supported in Integrated EMS for LMM Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	No	No
Clearing alarms	No	No
Deleting alarms	No	No
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No

Tasks Supported in Integrated EMS for LMM Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the LMM application to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->Application** menu command to invoke the Add Application wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS Application Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "LMM" from the **Device Type** list box.
- 5 Select the version of the device from the **Device Version** list box.

- 6 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 7 Click the **Next** button.
A message stating no fault interface for LMM application is displayed.
- 8 Click the **Next** button.
A message stating no performance interface for LMM application is displayed.
- 9 Click the **Finish** button to add the LMM application.
Once the LMM application is added, a message appears in the status bar of the wizard as in the following screen shot:



The LMM application with the specified name is added as a map symbol to the **EMS Applications** topology panel. It is also added to the **LMM** topology under the **EMS Applications** topology node in the Integrated EMS tree.

The LMM application can be added using Integrated EMS Web Client. For details, refer to [Adding an LMM application](#) procedure.

Adding a Trunk Maintenance Manager application (TMM application)

The SSPFS platform is the parent platform for the Trunk Maintenance Manager (TMM). This procedure describes how to add the TMM application to the Integrated EMS topology. After a TMM application is added to the Integrated EMS topology, it is displayed as a map symbol in the **EMS Applications** topology panel and **TMM** topology panel (present under the **EMS Applications** node) in the Integrated EMS tree.

The following list provides the operations available for TMM application in Integrated EMS.

Tasks Supported in Integrated EMS for TMM Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	No	No
Clearing alarms	No	No
Deleting alarms	No	No
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No

Tasks Supported in Integrated EMS for TMM Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the TMM application to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->Application** menu command to invoke the Add EMS Application wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS Application Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "TMM" from the **Device Type** list box.
- 5 Select the version of the device from the **Device Version** list box.

- 6 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 7 Click the **Next** button.
A message stating no fault interface for TMM application is displayed.
- 8 Click the **Next** button.
A message stating no performance interface for the TMM application is displayed.
- 9 Click the **Finish** button to add the TMM application.
Once the TMM application is added, a message appears in the status bar of the wizard as in the following screen shot:



The TMM application with the specified name is added as a map symbol to the **EMS Applications** topology panel. It is also added to the **TMM** topology under the **EMS Applications** topology node in the Integrated EMS tree.

The TMM application can be added using Integrated EMS Web Client. For details, refer to [Adding an TMM application](#) procedure.

Adding an OSSGate application

The SSPFS platform is the parent platform for the OSSGate application. This procedure describes how to add the OSSGate application to the topology. After a OSSGate application is added to the Integrated EMS topology, it is displayed as a map symbol in the **EMS Applications** topology panel and **OSSGate** topology panel (present under the **EMS Applications** node) in the Integrated EMS tree.

The following list provides the operations available for OSSGate application in Integrated EMS.

Tasks Supported in Integrated EMS for OSSGate Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	No	No
Clearing alarms	No	No
Deleting alarms	No	No
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No

Tasks Supported in Integrated EMS for OSSGate Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the OSSGate application to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->Application** menu command to invoke the Add EMS Application wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS Application Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "OSSGate" from the **Device Type** list box.
- 5 Select the version of the device from the **Device Version** list box.

- 6 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 7 Enter the OSSGate port in the **OSSGate Port** field or retain the default value as "10023".
Note: The OSSGate port must be configured to match the OSSGate port configured on the CMT platform.
- 8 Click the **Next** button.
A message stating no fault interface for the OSSGate application is displayed.
- 9 Click the **Next** button.
A message stating no performance interface for the OSSGate application is displayed.
- 10 Click the **Finish** button to add the OSSGate application.
Once the OSSGate application is added, a message appears in the status bar of the wizard as in the following screen shot:



The OSSGate application with the specified name is added as a map symbol to the **EMS Applications** topology panel. It is also added to the **OSSGate** topology under the **EMS Applications** topology node in the Integrated EMS tree.

The OSSGate application can be added using Integrated EMS Web Client. For details, refer to [Adding an OSSGate application](#) procedure.

Adding a Network Patch Manager application (NPM application)

The SSPFS platform is the parent platform for the Network Patch Manager application. This procedure describes how to add the NPM application to the Integrated EMS topology. After a NPM application is added to the Integrated EMS topology, it is displayed as a map symbol in the **EMS Applications** topology panel and **NPM** topology panel (present under the **EMS Applications** node) in the Integrated EMS tree.

The following list provides the operations available for NPM Application in Integrated EMS.

Tasks Supported in Integrated EMS for NPM Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No

Tasks Supported in Integrated EMS for NPM Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the NPM Application to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->Application** menu command to invoke the **Add EMS Application** wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS Application Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "NPM" from the **Device Type** list box.
- 5 Select the version of the device from the **Device Version** list box.

6 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform

7 Click the **Next** button.

In the Syslog Details panel, the fields displays the location of Customer Log File, Audit Log File, and Security Log File.

8 Click the **Next** button.

9 Click the **Finish** button to add the NPM.

Once the NPM is added, a message appears in the status bar of the wizard as in the following screen shot:



The NPM application with the specified name is added as a map symbol to the **EMS Applications** topology panel. It is also added to the **NPM** topology under the **EMS Applications** topology node in the Integrated EMS tree.

The NPM application can be added using Integrated EMS Web Client. For details, refer to [Adding an NPM application](#) procedure.

Adding a QoS Collector application (QCA)

The SSPFS platform is the parent platform for the QoS Collector application. This procedure describes how to add the QoS Collector application to the Integrated EMS topology. After an QCA is added to the Integrated EMS topology, it is displayed as map symbol in the **EMS Applications** topology panel and **QCA** topology panel (present under the **EMS Applications** node) in the Integrated EMS tree.

The following list provides the operations available for QoS Collector application in Integrated EMS.

Tasks Supported in Integrated EMS for QoS Collector Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No

Tasks Supported in Integrated EMS for QoS Collector Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the QoS Collector application to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->Application** menu command to invoke the Add EMS Application wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS Application Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "QoS Collector" from the **Device Type** list box.
- 5 Select the version of the device from the **Device Version** list box.

- 6 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform
- 7 Click the **Next** button.
In the Syslog Details panel, the list of fields displays the location of various log files such as Customer Log File, Audit Log File, and Security Log File.
- 8 Click the **Next** button.
A message stating no performance interface for QoS Collector application is displayed.
- 9 Click the **Finish** button to add the QoS Collector application.
Once the QoS Collector application is added, a message appears in the status bar of the wizard as in the following screen shot:



The QoS Collector application with the specified name is added as a map symbol to the **EMS Applications** topology panel. It is also added to the **QoS Collector** topology under the **EMS Applications** topology node in the Integrated EMS tree.

The QCA can be added using Integrated EMS Web Client. For details, refer to [Adding an QCA](#) procedure.

Adding a Synchronized Backup Restore Manager application (SBRM application)

The SSPFS platform is the parent platform for the Synchronized Backup Restore Manager application. This procedure describes how to add the Synchronized Backup Restore Manager (SBRM) application to the Integrated EMS topology. After an SBRM is added to the Integrated EMS topology, it is displayed as a map symbol in the **EMS Applications** topology panel and the **SBRM** topology panel (present under the **EMS Applications** node) in the Integrated EMS tree.

The following list provides the operations available for SBRM application in Integrated EMS.

Tasks Supported in Integrated EMS for SBRM Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	No	No
Managing or unmanaging the object	No	No
Fault Management		
Viewing associated events or alarms	No	No
Clearing alarms	No	No
Deleting alarms	No	No
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No

Tasks Supported in Integrated EMS for SBRM Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the SBRM application to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->Application** menu command to invoke the Add EMS Application wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS Application Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "SBRM" from the **Device Type** list box.
- 5 Click the **Next** button.

In the Syslog Details panel, the list of fields displays the location of various log files such as Customer Log File, Audit Log File, and Security Log File.

- 6** Click the **Next** button.

A message is displayed stating that there is no performance interface.

- 7** Click the **Finish** button to add the SBRM application.

Once the SBRM application is added, a message appears in the status bar of the wizard as in the following screen shot:



The SBRM application with the specified name is added as a map symbol to the **EMS Applications** topology panel. It is also added to the **SBRM** topology under the **EMS Applications** topology node in the Integrated EMS tree.

The SBRM can be added using Integrated EMS Web Client. For details, refer to [Adding an SBRM application](#) procedure.

Adding an Audio Provisioning Server application (APS application)

Integrated EMS discovers the Audio Provisioning Server application automatically when its corresponding APS manager is added to the Integrated EMS topology. Refer to the [Adding an Audio Provisioning Server Manager \(APS Manager\)](#) procedure to add an APS manager. The APS application is added as a map symbol in the **EMS Applications** topology panel and **APS** topology panel under the **EMS Application** topology node in the Integrated EMS tree.

The following table provides the operations available for APS application in Integrated EMS.

Tasks Supported in Integrated EMS for APS Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No

Tasks Supported in Integrated EMS for APS Application

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

Adding network elements

Integrated EMS manages the fault domain and provides a centralized location to access the management interfaces for the following NEs:

- Universal Signaling Point
- Passport 8600
- MS 2000
- STORM
- MAS
- Session Server
- CICM

This following procedures describes how to add the above NEs to the topology.

- [Adding an Universal Signaling Point \(USP NE\)](#)
- [Adding an Ethernet Routing Switch 8600 NE](#)
- [Adding a Media Server 2000 \(MS 2000 NE\)](#)
- [Adding a Storage Management NE \(STORM NE\)](#)
- [Adding a Media Application Server \(MAS NE\)](#)
- [Adding a Session Server NE](#)
- [Adding a Centrex IP Client NE \(CICM NE\)](#)

Note: Do not specify the IP address in the client GUI or the command prompt UI, with an octet which is prefixed with a "zero". An IP address whose octet ranges from 0 to 255, when prefixed with zero, such as 010, is interpreted as an octal number and is passed as an "8", which results in an invalid IP address.

The following NEs are auto-discovered by their corresponding managers:

- CS 2000 Core (managed by CS 2000 Core Manager)
- Call Agent Core (managed by CS 2000 Core Manager)
- MCS (managed by MCS Manager)
- Media Proxy (managed by MCS Manager)
- PVG 7480/15000 (managed by MDM)
- Multiservice Switch 15000 (managed by MDM)

- GWC (managed by GWC Manager)
- MG 9000 (managed by MG 9000 Manager)
- SAM21 (managed by SAM21 Manager)
- UAS (managed by UAS Manager)
- CICM SAM21 card view (managed by CICM Manager)
- MTX NE (managed by CEM Manager)
- MSC NE (managed by CEM Manager)
- HLR NE (managed by CEM Manager)
- TRI NE (managed by CEM Manager)

Adding an Universal Signaling Point (USP NE)

This procedure describes how to add the Universal Signaling Point (USP) NE to the Integrated EMS topology using the Java Web Start Client. The USP NE is added as a map symbol in the **Network Elements** topology panel and **USP** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The following list provides the operations available for USP NE in Integrated EMS.

Tasks Supported in Integrated EMS for USP NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	No
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No
Security		

Tasks Supported in Integrated EMS for USP NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the USP NE to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the **Add EMS/NE** wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "NE" from the Type list box.
- 5 Select "USP" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.

For the USP NEs with device version "6.2" the client launched from Integrated EMS is of the type Citrix and for device version "7.0" is of type Java Web Start. Refer to "Launching applications

from USP NEs" of *Integrated EMS Basics*, NN10329-111 for procedure to launch USP applications.

If the device version is	Do
6.2	follow step 8 to step 17 and step 20
7.0	follow step 7 to step 17 and step 20
8.0	follow step 7 to step 20

- 7 Enter the client server IP address in the **Client Server IP** field.
- 8 Enter the inactive agent IP address in the **Unit1** field.
- 9 Click the **Next** button.

Note: When adding a USP NE to the Integrated EMS inventory the SNMP attributes (refer to [step 10](#) to [step 14](#)) must align with the configuration of the USP network element. In addition, the manager IP address in the USP must be configured to forward its SNMP traps to the Integrated EMS Server application (the Integrated EMS Virtual IP address). The configuration of the SNMP attributes in the USP are described in the *USP Security and Administration guide*, NN10159-611 and the *USP Compact Security and Administration guide*, NN10160-611.

- 10 Enter the port value "161" (in which the NE agent communicates with Integrated EMS) in the **Port** field.
- 11 Select the SNMP version from the **Version** list box.

Note: The SNMP version must align with the version configured in the USP Network Element. The default SNMP version in the USP is V3.

If the SNMP version is	Do
v3	follow step 12 to step 13 and proceed to step 15
v2	proceed to step 14

- 12 Retain the value "NoAuthNoPriv" for the **Security Level** list box.
- 13 Enter the value for the **User name** field as specified in *USP Security and Administration guide*, NN10159-61.
Note: The value for the **Context name** field must be left blank.
- 14 Enter the community string in the **Community** field.

- 15 Click the **Next** button to proceed to the Standby Fault Interface screen in the wizard.
- 16 Repeat [step 10](#) to [step 14](#).
- 17 Click the **Next** button.

The Performance Interface panel asking for performance interface details is displayed.

- 18 Type the user name for FTP PULL in the **User ID** field.
- 19 Type the password in the **Password** field.
- 20 Click the **Finish** button to add the USP NE.

Once the USP NE is added, a message appears in the status bar of the wizard as in the following screen shot:



The USP NE with the specified name is added as a map symbol to the **Network Elements** topology panel. It is also added to the **USP** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

Note: Only the active USP unit object provides an interface to determine the fault state of the USP. The inactive USP unit object status is in unknown state (map symbol has gray background color). The Integrated EMS dynamically detects when the USP unit has been swacted. When this occurs, it initiates alarm resync with the newly active USP unit and updates the state of the USP unit objects in the Integrated EMS Client to reflect this change in activity. When this occurs, the previous active unit object map is changed to unknown state, and the new active unit is updated to reflect the highest alarm state of the USP device. For the color mapping of various object status, refer to [Significance of map symbol background color](#) table of "[Updating status of objects manually](#)".

The USP NE can be added using Integrated EMS Web Client. For details, refer to [Adding an USP NE](#) procedure.

Adding an Ethernet Routing Switch 8600 NE

Application

Use this procedure to add the Ethernet Routing Switch (ERS) 8600 NE to the topology.

The ERS 8600 NE is added as a map symbol in the Network Elements topology panel and ERS 8600 topology panel under the Network Elements topology node in the IEMS tree.

Adding an ERS 8600 NE using Java Web Start client

The following list provides the operations available for ERS 8600 NE in IEMS.

Tasks supported in IEMS for ERS 8600 NE

Task in IEMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No

Tasks supported in IEMS for ERS 8600 NE

Task in IEMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	Yes (for version 8.0 and 7.0)	No
Others operations		
Launching corresponding applications	Yes	No

Prerequisites**For IEMS to receive ERS 8600 fault and performance data**

ERS 8600 NEs must be configured to send fault and performance data to IEMS; without this configuration, IEMS receives no fault and performance data from ERS 8600 NEs.

For launching ERS 8600 Device Manager

ERS 8600 Device Manager must be installed on the client machine in order to launch the GUI. For details of how to install the Device Manager, refer to *Installing ERS 8600 Switch Modules 312749F*.

Action**At the IEMS workstation**

- 1 Launch the IEMS Java Web Start Client (refer to "Launching IEMS Java Web Start Client" of the *IEMS Basics*, NN10329-111).
- 2 Select the **Tools**-->Add-->EMS/NE menu command to invoke the **Add EMS/NE** wizard.

- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in the Add EMS/NE wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select **NE** from the Type list box.
- 5 Select **ERS 8600** from the Device Type list box.
- 6 Select the version of the device from the Device Version list box.
- 7 Check the Radius Secret field to enable the RADIUS secret password and enter RADIUS secret password in the Radius Secret field.
- Note:** If the Radius Secret field is checked and the password is not entered, the wizard displays "Enter the radius secret" error.
- 8 Click the **Next** button.
- 9 Enter the port (in which the NE agent communicates with IEMS) in the Port field or retain the default value as "161".
- 10 Enter the community in the Community field.
- Note:** This field must be specified for SNMP versions v1 and v2 alone and not for SNMP v3.
- 11 Select the SNMP version from the Version list box. If you select **v3** from Version list box, select the security level from the SecurityLevel list box.
- If you select the value **AuthPriv** from Security Level list box, enter the following details:
- User name
 - Authentication Protocol
 - Authentication Password
 - Privacy Password

Note: Value for the Context name field need not be specified as that is not used by the ERS 8600 device.

- 12 Click the **Next** button.
- 13 Repeat [step 9](#) to [step 11](#).
- 14 Click the **Finish** button to add the ERS 8600.

Once the ERS 8600 NE is added, a message appears in the status bar of the wizard as in the following screen shot:



The ERS 8600 NE with the specified name is added as a map symbol to the Network Elements topology panel. It is also added to the ERS 8600 topology panel under the Network Elements topology node in the IEMS tree.

- 15 You have completed this procedure.

The ERS 8600 NE can be added using IEMS Web Client. For details, refer to [Adding an Ethernet Routing Switch 8600 NE](#).

Configuring the ERS 8600 to send events and alarms to the IEMS

Use this procedure to add an SNMP trap destination address to the ERS 8600 to allow for events and alarms to be sent to the IEMS server, including Open Shortest Path First (OSPF) events and alarms if applicable to your office.

Prerequisites

None

Action

Perform the steps that follow to complete this procedure.

At a web browser

- 1 Launch the Integrated EMS Java Web Start Client. Refer to procedure "Launching Integrated EMS Java Web Start Client" in *IEMS Overview*, NN10329-111.

At the IEMS GUI

- 2 Click on **Network Elements** in the IEMS topology tree.
- 3 Right-click on an ERS8600 map symbol and select **ERS8600 Device Manager->Open**.

Note: The first time you run the Device Manager, you will need to specify where the executable for the Device Manager is located. The file you need is `jdm.exe`. Use the **Browse** button to locate the file, then click **OK**.

The Device Manager opens as shown in the figure that follows.



- 4 From the Device menu, select **open**.
- 5 Enter the following information:
 - the IP address for the ERS 8600 in the Device Name field
 - check the v3 Enabled box
 - Enter initial in the User Name field



Device Manager 5.7.1.0 - Open Device

Device Name: 47.142.106.1

Read Community: *****

Write Community: *****

SNMPv3

v3 Enabled

User Name: initial

Authentication Protocol: NONE

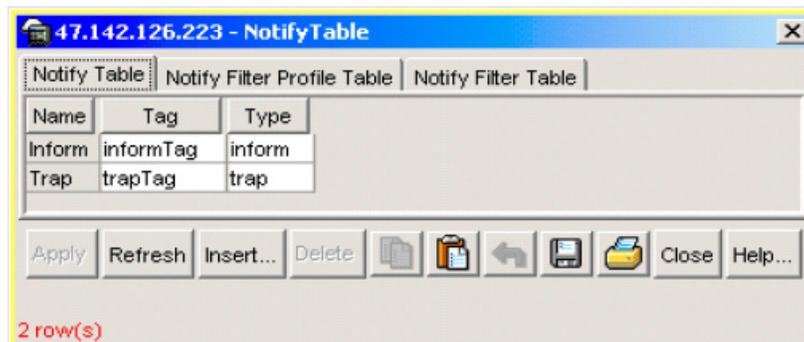
Authentication Password:

Privacy Protocol: NONE

Privacy Password:

Open Ping... Telnet... Close

- 6 Click **Open**.
- 7 Click **Edit->SNMPv3->Notify Table**.
- 8 Verify the entries for Trap are as follows:
 - Tag = trapTag
 - type = trap



Name	Tag	Type
Inform	informTag	inform
Trap	trapTag	trap

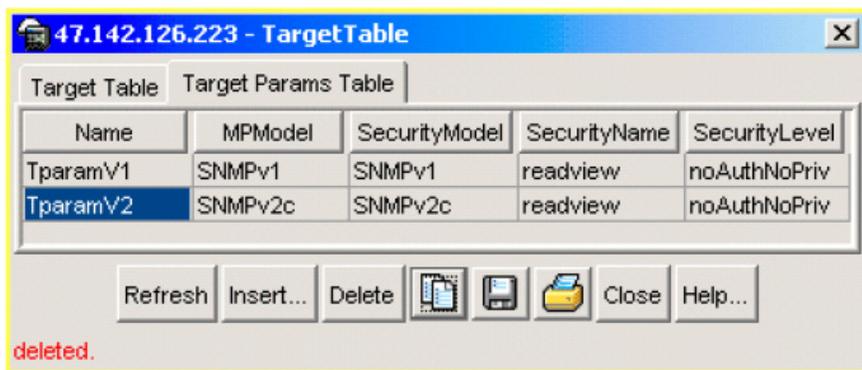
Apply Refresh Insert... Delete Help...

2 row(s)

Note: If the entries are not present, create using **Insert**.

- 9 Close the Notify Table widow.
- 10 Click **Edit->SNMPv3->Target Table**.

- 11 Select the **Target Params Table** tab.
- 12 Verify the entries for TparamV1 and TparamV2 are present.



Note: If the entries are not present, create using **Insert**.

- 13 Select the **Target Table** tab.
The Target Table tab is displayed.
- 14 Click **Insert**.
- 15 Enter the following information:
 - Name = <a unique name>
 - TAddress = <IEMS IP Address:162>
For example 10.10.10.10:162
 - TagList = trapTag
 - Params = TparamV2

Note: TparamV2 must be set if you want to use V2C traps. You must use TparamV2 on ERS8600 3.7.0 loads and higher.
- 16 Click **Insert**.
- 17 Click **Close**.
- 18 Click **Device->Exit**.
- 19 Repeat [step 3](#) to [step 18](#) for each ERS 8600.

At the ERS 8600

- 20** Determine if OSPF is enabled on the ERS 8600 by typing

show ip ospf info

and pressing the Enter key.

Example response

```
Ospf General
RouterId: 1.1.1.2
AdminStat: enabled
VersionNumber: 2
AreaBdrRtrStatus: true
ASBdrRtrStatus: false
ExternLsaCount: 1
ExterLsaCksumSum: 29660 (0x73dc)
TOSSupport: 0
OriginateNewLsas: 270
RxNewLsas: 1047
TrapEnable: false
AutoVirtLinkEnable: false
SpfHoldDownTime: 10
```

When the value for TrapEnable is false, OSPF events will not be sent to the IEMS. The value for TrapEnable must be true for OSPF events to be sent to the IEMS.

Note: OSPF routing must already be configured and enabled. If required, refer to *Configuring IP Routing Operations*, 314720-d.

- 21** Use the following table to determine your next step.

If the value for TrapEnable is	Do
false	step 22
true	you have completed this procedure

- 22** Enable OSPF by typing
- config ip ospf trap enable**
- and pressing the Enter key.

- 23** Ensure OSPF is enabled on the ERS 8600 by typing

```
show ip ospf info
```

and pressing the Enter key.

Example response

```
Ospf General  
RouterId: 1.1.1.2  
AdminStat: enabled  
VersionNumber: 2  
AreaBdrRtrStatus: true  
ASBdrRtrStatus: false  
ExternLsaCount: 1  
ExterLsaCksumSum: 29660 (0x73dc)  
TOSSupport: 0  
OriginateNewLsas: 270  
RxNewLsas: 1047  
TrapEnable: true  
AutoVirtLinkEnable: false  
SpfHoldDownTime: 10
```

- 24** Repeat [step 20](#) to [step 23](#) for each ERS 8600.
You have completed this procedure.

Configuring Passport 8600 for Integrated EMS

The Passport 8600 device must be configured to establish communication with Integrated EMS and other management applications. This procedure describes how to configure the Passport 8600 device, and is made up of the following basic steps:

At the Integrated EMS server

- 1 Telnet to PP860 and login.
- 2 Load encryption modules.
- 3 Configure SNMP -v3.
- 4 Enable SSH.
- 5 Disable Non-secure services.
- 6 Verify SSH is working and disable telnet.
- 7 Disable SNMPv1/v2c.
- 8 Change default SNMPv1 community strings.
- 9 Change the login passwords.
- 10 Save the configuration.
- 11 Configure Passport RADIUS.

Telnet to PP8600 and login

Telnet to login to PP8600 configuration console to configure the device. If the PP8600 is contained in a VLAN, telnet must be performed from workstation such as the Integrated EMS server. The default userid and password are rwa and rwa, respectively. The following configuration steps must be performed on the PP8600.

At the Integrated EMS server

- 1 Telnet the device


```
telnet 47.142.126.223
*****
* Copyright (c) 2004 Nortel Networks, Inc.
*
* All Rights Reserved
* Passport 8010
* Software Release 3.7.0.0
*****
```
- 2 Login to the device with the given userid and password.


```
Login: rwa
```

```
Password:***
```

Note: The software release level must be 3.7 or greater. After successful login the prompt appears as

```
PP8600:5#
```

- 3 The string shown as a prefix (in this case, PP8600) is the mib-2 object, SNMPv2-MIB:sysName.0. It can be changed with the following command:

```
config cli prompt <new-prompt>
```

- 4 Display a list of commands that are available at the current context by entering:

```
?
```

It also displays a list of sub-contexts that can be entered through the sub-context name. This is similar to traversing a hierarchy of commands. The command info displays the state of current context and lists the available sub-contexts. The command info displays the state of the current context and lists the available sub-contexts. The state of a context is a list of attributes and corresponding values. Configuration is performed through the config context. Enter the context name

```
PP8600:5# config
```

- 5 Change the prompt to the following:

```
PP8600:5/config#
```

Notes on shell cursor movement and editing

- Left and right arrow keys move the cursor backward and forward on the command line.
- Up and down arrow keys moves backward and forward in the command stack.
- Ctrl-a moves the cursor to the beginning of the command line.
- Ctrl-e moves the cursor to the end of the command line.
- Ctrl-h is a destructive backspace. The Backspace key does nothing.
- You are always in insert mode.
- Ctrl-d is passed to telnet/ssh and closes the session.

Load encryption modules

From the config context, enter the commands,

```
load-encryption-module DES  
load-encryption-module 3DES
```

Encryption modules must be loaded onto the PP8600 flash using ftp or tftp or by use of PCMCIA slot. Refer to the applicable installation guide for Passport 8600 Routing Switch.

If the DES encryption module is not available, then SNMPv3 –USM can not be configured. This means that authenticated and encrypted communications between OAM applications and the PP8600 are not available. SNMP communications can only be made through v1 or v2c protocols. There is no additional configuration required to get or set communications through v1 or v2c.

If the Triple DES (3DES) encryption module is not available, then SSH cannot be configured. Telnet is the only available communications protocol for accessing the PP8600 command line.

Configure SNMP -v3

The following tables are used to configure SNMPv3 authentication and privacy.

- USM table defines users, authentication/privacy protocols, and passwords.
- Group-Member table defines to which groups each USM user belongs.
- Group-Access table defines the access rights that each user has to the objects in the MIB tree.
- Notify table defines the types of notifications (TRAP or INFORM) that are sent.
- Target-Param table defines which USM user receives a notification.
- Target-Address table defines the network managers that receive notifications. Each row denotes a unique manager. It has one or more references into the Notify table to determine the notification type. It also has one reference into the Target-Param table to determine the user credentials used to send the notification.
- Community Table contains the Read and Write community strings for SNMPv1/v2c.

Note: The Target-Param table references the CommunityTable for sending v1/v2c traps.

Configure SNMP -v3

Change into the snmp-v3 context by entering the context name.

The new prompt is displayed as***PP8600:5/config/snmp-v3#***

- 1** Add users iems and jdm. Create a different user for each application such that a password change made using the JDM does not break the IEMS application. The SNMPv3-USM uses an authentication protocol and password and also a privacy protocol and password. Entering the command, the command syntax is:

```
usm create <user> <auth_prot> auth <pw1> priv  
<pw2>
```

where <auth_prot> is one of: sha | md5

- a** Enter the commands,

```
usm create iems sha auth iemspass1 priv  
iemspass2
```

```
usm create jdm sha auth jdmpass1 priv
jdmpass2
```

These two commands create the 2 users: iems and jdm with:

- authentication protocol of SHA-1 and authentication password of iemspass1 and jdmpass1
- privacy password of iemspass2 and jdmpass2. The privacy encryption protocol is DES. This is the only one supported by the PP8600.

The information above must be noted as it is used to configure both the IEMS and JDM.

Attribute	Value
User Name	iems
Authentication Protocol	sha
Authentication Password	<user specified>
Privacy Protocol	DES (only allowed value on PP8600)
Privacy Password	<user specified>

Enter the command

```
usm info
```

The current context is displayed:

```
User/Sec Name      Engine Id      Protocol
-----
iems  800008E00300E07BA7B400  HMAC_SHA, DES
PRIVACY
initial 800008E00300E07BA7B400  NO AUTH, NO
PRIVACY
jdm    800008E00300E07BA7B400  HMAC_SHA, DES
PRIVACY
```

The user name initial is a pre-configured value for SNMPv1.

- 2 Add user iems to vacm. This creates the group iemgrp and adds the users iems and jdm to it. The command syntax is:

```
group-member create <user_name> <model>
<group_name>
```

where <model> is one of: snmpv1 | snmpv2c | usm

Enter the commands,

```
group-member create iems usm iemsgrp
group-member create jdm usm iemsgrp
```

- 3** Create an access control list for the iemsgrp. The empty double quoted string is the context name. This is equivalent to a null context. It is not used and not supported by the PP8600. The command syntax is,

```
group-access create <group_name> <prefix>
<model> <level>
```

where:

<model> is one of: snmpv1 | snmpv2c | usm

<level> is one of: noAuthNoPriv | authNoPriv | authPriv

Enter the command,

```
group-access create iemsgrp "" usm authPriv
```

Note: The <prefix> is saved as the context name but is not used in the current level of firmware.

- 4** Indicate the branches of the mib tree that iemsgrp is allowed to access. The command syntax is,

```
group-access view <group_name> <prefix> <level>
read <view_name> write <view_name> notify
<view_name>
```

Enter the command,

```
group-access view iemsgrp "" usm authPriv read
org write org notify org
```

Values for <view_name> can be seen with the command,

```
mib-view info
```

This defines the part of the mib tree that can be accessed. The value org specifies every object under the prefix *.iso.org*.

- 5** Add or verify the available notification types. There must be two pre-configured types. These can not be altered or deleted and is sufficient for our needs. Enter the command:

```
notify info
```

The Notify Table is displayed:

```
-----
Notify Name          Tag                Type
-----
inform              informTag         inform
-----
```

```
Trap                trapTag                trap
```

If this is not correct, then add the information using the following command syntax:

```
notify create <notify_name> tag <value> type
<type>
```

where:<type> is one of: trap | inform

Enter the command,

```
notify create tag Inform informTag type inform
notify create tag Trap trapTag type trap
```

6 Add target address for traps. First, we must add an entry into target-param. The command syntax is,

```
target-param create <tparam_name> mp-model
<value> sec-level <value> sec-name <value>
```

where the value for:

mp-model is one of: *snmpv1* | *snmpv2c* | *usm*

sec_level is one of: noAuthNoPriv | authNoPriv | authPriv

sec-name is the usm user entered in step 1. either iems or jdm

Enter the commands,

```
target-param create TparamV3iems mp-model usm
sec-level authPriv sec-name iems
target-param create TparamV3jdm mp-model usm
sec-level authPriv sec-name jdm
```

This creates a new row in the table with name TparmsV3iems referencing our iems user in the USM table. Enter the command:

```
target-param info
```

The Notify Table is displayed:

```
-----
Target Name    MP Model Security Name    Sec Level
-----
TparamV1      snmpv1   readview noAuthNoPriv
TparamV2      snmpv2c  readview noAuthNoPriv
TparamV3iems      usm      iems      authPriv
TparamV3jdm      usm      jdm       authPriv
```

TparamV1 and TparamV2 are pre-configured default entries for SNMP v1 and v2c. They must not be deleted.

- 7 Add the ip-address of the IEMS that receives the traps. Repeat for each IEMS. The command syntax is,

```
target-addr create <target_name> <ip_addr>
<target_parm> taglist <value>
```

Enter the command,

```
target-addr create bumrot 47.142.94.68:162
TparamV3iems taglist trapTag
```

...or...

```
target-addr create bumrot 47.142.94.68:162
TparamV3jdm taglist trapTag
```

This creates an entry for

- A host called bumrot. This is an arbitrary string and does not match the real host name. The PP8600 does not use a DNS to resolve the ip-address. This must be a unique value in the table.
- The ip-address port to receive the trap. This must also be a unique value in the table.
- A reference to the user who receives the trap at the specified ip-address. This is designated through the target-parm name of TparamV3iems or TparamV3jdm.
- A reference to the kind of notification to be sent. This is designated through the notify name of the trapTag and points back to the Notify Table.

Note: The <ip_addr> is the primary key in this table. A trap can be sent to only one user (one target_parm) on the specified address. This means, one cannot issue both the commands listed above. The second is an error indicating a duplicate ip address

If SNMP v1/v2c traps are being configured, enter the command above but specify either TparamV1 or TparamV2 as the <target_parm>. For example, target-addr create bumrot 47.142.94.68:162 TparamV1 taglist trapTag

Enable SSH

Enter the config sub-context. From the config/snmp-v3 sub-context you can enter the context name, config, to jump to the correct context or enter a single period (.) to move up one context level. The new prompt is displayed as,

```
PP8600:5/config#
```

Enter the following command,

```
bootconfig flags sshd true
sys set ssh action dsa-keygen 1024
sys set ssh action rsa-keygen 1024
sys set ssh enable
```

Disable Non-secure Services

From the config sub-context, enter the following commands,

```
bootconfig flags ftpd false
bootconfig flags tftpd false
bootconfig flags rlogind false
web-server disable
```

Verify SSH is working and Disable telnet

Login using SSH and from the config sub-context enter,

```
bootconfig flags telnetd false
save bootconfig
```

Disable SNMPv1/v2c

Access through SNMPv1 and v2c is controlled using community strings. From the config/snmp-v3 context enter the command, community info, to display the current table. The pre-configured values for public and private community names are contained in the Security Names readview and initialview, respectively. The column designated as, name, is the community name string and is shown as a list of asterisks. The pre-configured values are “public” and “private”.

IndexName	Security Name	Transport Tag
first	*****	readview
second	*****	initialview

The PP8600 does not allow pre-configured values to be deleted in most of the tables. It does not allow either row shown above to be deleted. It does, however, allow the Name field to be changed. We can change the public community string to some real long value, but the PP8600 is subjected to brute force attacks as the community name string is part of the SNMP PDU.

Alternatively, if the Security Name field is altered, it can effectively disable SNMPv1/v2c. The Security Name field is used to access the GroupMember table to determine authority to access various elements of the MIB tree. To change the sec-name enter the commands,

```
snmp-v3 community secname first new-secname was
readview
```

```
snmp-v3 community secname second new-secname
was_initialview
```

Now, all v1/v2c get and set requests fail VACM access checks due to inability to find the Security Name in the GroupMember table. The PP8600 is not subjected to disruption as the Security Name is not included in the SNMP PDU.

Change default SNMPv1 community strings

This section is included if the DES encryption module cannot be loaded and SNMPv3 cannot be enabled.

The read and write community name strings of public and private must be changed. From the config/snmp-v3 context enter the command, community info, to display the current table. The pre-configured values for public and private community names are contained in the Security Names readview and initialview, respectively. The column designated as, name, is the community name string and is shown as a list of asterisks.

Index	Name	Security Name	Transport Tag
first	*****		readview
second	*****		initialview

To change community strings, enter the commands:

```
snmp-v3 community commname first new-commname
<publicvalue>
```

```
snmp-v3 community commname second new-commname  
<privatevalue>
```

Change the login passwords

Passwords are changed through the configuration context,

```
cli password.
```

It is recommended that the passwords for the rwa and rw be changed. Enter the following commands and follow the prompts:

```
cli password rw rw
```

```
cli password rwa rwa
```

Save the configuration

Enter the following commands,

```
save bootconfig
```

```
save config
```

Configure Passport RADIUS

RADIUS (Remote Authentication Dial-in User Service) provides a high degree of security against unauthorized access to the Passport 8600 switch. It is based on a client- server architecture allowing a number of communication servers and clients to authenticate users identity through a central database.

The Passport 8600 switch operates as a client of RADIUS. The switch is responsible for passing user information to the designated RADIUS servers. Since the Passport switch operates in a LAN environment, user access is allowed via Telnet, Rlogin, and Console log-in. When the Passport switch is configured with radius enable, any user of the switch presents an authentication information in the form of customized login prompt and password. Once authentication process meets all the criteria set in the radius server and switch configuration, the user is permitted to access the switch. If there's no match in any part of the criteria, then the user is rejected and denied access to the switch.

To enable RADIUS on Passport switch

- 1 From the CLI, type
config radius enable
- 2 From JDM, from the pull down menu, click on Edit ->security -> radius global -> enable.

To create a RADIUS server entry

- 1 From CLI, type

```
config radius server create <ip address of the  
radius server> secret <the shared secret defined  
in the server for this switch> port <what udp  
port will be used, matching the radius server's  
udp port configuration>
```
- 2 From JDM, from the pull down menu, click on Edit -> security -> radius server -> insert. You can just fill in the blanks with the necessary information like the IP address of the radius server and secret key.

To assign the order of which radius server will authenticate the client first:

- 1 From CLI, type

```
set <IP address of the server> priority <choose  
a value from 1 to 10>
```

The set value of 1 in the priority field defines the first server to provide authentication.

Other default radius server parameters can be change by using the "set" command:

- 1 From CLI, type

```
config radius server set <ip of server> field to  
be changed <value>
```
- 2 From JDM, click on Edit -> security -> radius server -> then edit the desired parameter.

An Example:

```
RTPU_PP8600:6/config/radius/server# create  
47.142.106.225 secret nortelnetworks port 1812
```

```
RTPU_PP8600:6/config/radius/server# info Sub-Context:
```

Sub-Context:

Current Context:

create:

Name	Used by	Secret	Port	Prio	Retry	Timeout	Enabled
Acct-port 47.142.10 6.225	Acct-enabled cli	source-ipno rtelnetwork s	1812	10	1	3	true

delete : N/A

set : N/A

```
RTPU_PP8600:6/config/radius/server# set
47.142.106.225 usedby cli priority 1
```

```
RTPU_PP8600:6/config/radius/server# info
```

Sub-Context:

Current Context:

create:

Name	Used by	Secret	Port	Prio	Retry	Timeout	Enabled
Acct-port4 7.142.106 .225	Acct-ena bledcli	source-ipno rtelnetwork s	1812	10	1	3	true

delete : N/A

set : N/A

```
RTPU_PP8600:6//config/radius# enable true
```

Adding a Media Server 2000 (MS 2000 NE)

The Media Server 2000 NE can be managed using Integrated EMS by adding them to the Integrated EMS topology. The MS 2000 NE includes the MS 2010 and MS 2020 NEs. The MS 2000 NE is added as a map symbol in the **Network Elements** topology panel and **MS2000** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The following list provides the operations available for MS 2000 NE in Integrated EMS.

Tasks Supported in Integrated EMS for MS 2000 NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms (incremental resync supported)	Yes	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No

Tasks Supported in Integrated EMS for MS 2000 NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the MS 2000 NE to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the **Add EMS/NE** wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "NE" from the Type list box.
- 5 Select "MS2000" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.

- 7 Enter the Web server user name in the **User Name** field.
- 8 Enter the Web server password in the **Web Password** field.
- 9 Click the **Next** button.
- 10 Enter the port (in which the NE agent communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 11 Enter the community in the **Community** field.
- 12 Enter the write community in the **Write Community** field.
- 13 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context nameIf you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication ProtocolIf you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication Protocol
 - Privacy Password
- 14 Click the **Next** button to proceed to the Performance Interface screen in the wizard.
- 15 Repeat [step 10](#) to [step 13](#) excluding the [step 12](#).
- 16 Click the **Finish** button to add the MS 2000 NE.

Once the MS 2000 is added, a message appears in the status bar of the wizard as in the following screen shot:



The MS 2000 NE with the specified name is added as a map symbol to the **Network Elements** topology panel. It is also added to the **MS2000** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The MS 2000 can be added using Integrated EMS Web Client. For details, refer to [Adding an MS 2000 NE](#) procedure.

Adding a Storage Management NE (STORM NE)

STORM is the acronym for STORAge Management Card. STORM NEs can be managed using Integrated EMS by adding them to the Integrated EMS topology. This procedure describes how to add the STORM NE to the topology.

Note: STORM-Integrated EMS integration is not supported with the STORM dotHill configuration. The dotHill version of the STORM device does not have an SNMP agent to forward or read the faults from the STORM device. Integrated EMS integration is only supported with the new STORM-XTS configuration.

Required prerequisites for Integrated EMS to receive STORM fault and performance data

STORM must be configured to send fault data to Integrated EMS. The STORM has a tool called **commish** which is used to configure the STORM with Integrated EMS server virtual IP address and port for sending the fault data to Integrated EMS; without this configuration, Integrated EMS receives no fault data from STORM. For details, refer to [Configuring STORM for Integrated EMS](#) procedure.

Required prerequisites for launching STORM Manager

STORM has to be configured using **SSPFS CLI** tool for launching STORM manager from Integrated EMS Client. For details, refer to *ATM/IP Solution-level Configuration Management*, NN10409-500.

Adding STORM NE using Java Web Start Client

The following list provides the operations available for STORM NE in Integrated EMS.

Tasks Supported in Integrated EMS for STORM NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes

Tasks Supported in Integrated EMS for STORM NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	Yes	Yes
Deleting alarms	Yes	Yes
Resynchronizing alarms (incremental resync supported)	Yes	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the STORM NE to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the **Add EMS/NE** wizard.

- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "NE" from the Type list box.
- 5 Select "STORM" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Click the **Next** button.
- 8 Enter the port (in which the NE agent communicates with Integrated EMS) in the Port field or retain the default value as "161".
- 9 Select the SNMP version "v3" from the **Version** list box.
- 10 Select the security level from **SecurityLevel** list box. If the value "NoAuthNoPriv" is selected from the SecurityLevel list box, enter the following details:
- User name (default STORM user name is v3admin)
 - Context name
- If the value "AuthNoPriv" is selected from **SecurityLevel** list box, enter the following details:
- User name (default STORM user name is v3admin)
 - Context name
 - Authentication Protocol
- If the value "AuthPriv" is selected from **SecurityLevel** list box, enter the following details:
- User name (default STORM user name is v3admin)
 - Context name

- Authentication Protocol
 - Privacy Password
- 11 Click the **Next** button to proceed to the Performance Interface screen in the wizard.
 - 12 Repeat [step 8](#) to [step 9](#).
 - 13 Click the **Finish** button to add the STORM.

Once the STORM is added, a message appears in the status bar of the wizard as in the following screen shot:



The STORM NE with the specified name is added as a map symbol to the **Network Elements** topology panel. It is also added to the **STORM** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The STORM can be added using Integrated EMS Web Client. For details, refer to [Adding a STORM NE](#) procedure.

Configuring STORM for Integrated EMS

Use this procedure to configure a STORM SAM-XTS unit to forward STORM fault information to an Integrated EMS. This procedure requires administrator privilege.

At Integrated EMS workstation

- 1 Log in to the STORM SAM-XTS unit as the root user by right clicking on the STORM icon and selecting **Launch Command Line** from the context menu.

A console window opens and prompts for a user name. Enter root and press the Return key. Enter the root user password at the next prompt, and press the Return key.

- 2 Start the commissioning shell:

```
> commish
```

The screen clears and a console menu application starts.

```

System Setup, Copyright 2002 Nortel Networks, All Rights Reserved
-----
Setup Stages | Introduction to System Setup
-----
Introduction
Hostname
IPAddress      Welcome to the system setup tool.
Netmask
Gateway
Timezone
NTP
Logs
SNMP
Applications
Summary

          |-----|
          | Abort |           | Next>> |
          |-----|
-----
|
| This tool will help you to bring this server into service.
| Use the <TAB> key to move and select fields
| and the <ENTER> key to confirm the selection
|

```

Note: *If the screen is garbled, press Ctrl+c to exit the application, enter **export TERM=vt100**, press Return, and start the commish tool again.*

- 3 Press the Return key to accept the existing datafill until the menu advances to the SNMP menu option.
- 4 On the SNMP menu screen, enter the IP address and port number of Integrated EMS server application and the SNMP user name provisioned at Integrated EMS server application.

SNMP menu option screen

```

System Setup, Copyright 2002 Nortel Networks, All Rights Reserved
-----
Setup Stages |
Introduction | Configure the SNMP Trap destinations (optional)
-----
Hostname |
IPAddress | Please enter up to 2 SNMP trap destinations
'ipaddr<:port>' |
Netmask |
Gateway | Trap destination 1
Timezone | []
NTP | Trap destination 2
Logs | []
SNMP | SNMPv3 User Name (eg: v3admin)
Applications | []
Summary |

-----
| | <<Back | | Next>> |
-----

-----
| Please specify up to 2 destination IP addresses and ports
| which you want receive SNMP traps. eg: 192.168.5.4:9999
| Also specify the SNMPv3 user name to use for traps/gets

```

- Note:** Trap destination should be set to the Integrated EMS virtual IP address. The default trap destination port is 162.
- 5 Press the Return key to accept the SNMP provisioning, and continue pressing the Return key to advance to the Summary menu option screen.
 - 6 On the Summary option menu screen, use the tab key to position the cursor on the Finish button and then press the Return key to commit the provisioning. A reboot is not required.

Adding a Media Application Server (MAS NE)

This procedure describes how to add the Media Application Server (MAS) NE to the Integrated EMS topology. The MAS NE is added as a map symbol in the **Network Elements** topology panel and **MAS** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

Required prerequisites for Integrated EMS to receive MAS fault and performance data

MAS must be configured to send fault data to Integrated EMS; without this configuration, Integrated EMS receives no fault and performance data from MAS NEs.

Adding an MAS NE using Java Web Start client

The following list provides the operations available for MAS NE in Integrated EMS.

Tasks Supported in Integrated EMS for MAS NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	No
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	No	No
Performance Management		

Tasks Supported in Integrated EMS for MAS NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the MAS NE to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the **Add EMS/NE** wizard.
- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "NE" from the **Type** list box.
- 5 Select "MAS" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Click the **Next** button.
- 8 Enter the port (in which the NE agent communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 9 Enter the community in the **Community** field.
- 10 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context nameIf you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication ProtocolIf you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication Protocol
 - Privacy Password
- 11 Click the **Next** button to proceed to the Performance Interface screen in the wizard.
- 12 Enter the directory name where the CSV file is getting pushed in Integrated EMS Server from the device in the **Directory Name** field.
- 13 Enter the file mask of the CSV file getting pushed in the **File Name** field.

Wildcard support is available for this field.

Example

If the file names starts with "SystemOMs" string, user can enter the value "SystemOMs*.csv".

Note: It must be ensured while configuring each MAS device that the operational measurement (OM) file names are unique. This is useful to differentiate data transmitted from each of the devices.

- 14 Click the **Finish** button to add the MAS NE.

Once the MAS NE is added, a message appears in the status bar of the wizard as in the following screen shot:



The MAS NE with the specified name is added as a map symbol to the **Network Elements** topology panel. It is also added to the **MAS** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The MAS NE can be added using Integrated EMS Web Client. For details, refer to [Adding an MAS NE](#) procedure.

Adding a Session Server NE

This procedure describes how to add the Session Server NE to the Integrated EMS topology. The Session Server NE is added as a map symbol in the **Network Elements** topology panel and **Session Server** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

Required prerequisites for Session Server to receive fault and performance data

Session Server NE must be configured to send fault and performance data to Integrated EMS; without this configuration, Integrated EMS receives no fault and performance data from Session Server NEs.

Required prerequisites for launching Session Server

Session Server NE has to be configured using **SSPFS CLI** tool for launching Session Server from Integrated EMS Client. For details, refer to *ATM/IP Solution-level Configuration Management*, NN10409-500.

Adding a Session Server NE using Java Web Start client.

The following list provides the operations available for Session Server NE in Integrated EMS.

Tasks Supported in Integrated EMS for Session Server NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		
Viewing associated events or alarms	Yes	No
Clearing alarms	No	No
Deleting alarms	Yes	Yes

Tasks Supported in Integrated EMS for Session Server NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Resynchronizing alarms	Yes	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the Session Server NE to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the **Add EMS/NE** wizard.

- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "NE" from the **Type** list box.
- 5 Select "Session Server" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the device mode from the **Mode** list box.
- 8 Click the **Next** button to proceed to the Fault Interface screen in the wizard.
- 9 Enter the port (in which the NE agent communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 10 Enter the community in the **Community** field.
- 11 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:
- User name
 - Context name
- If you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:
- User name
 - Context name
 - Authentication Protocol

If you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:

- User name
 - Context name
 - Authentication Protocol
 - Privacy Password
- 12 Click the **Next** button to proceed to the Performance Interface screen in the wizard.
 - 13 Repeat [step 9](#) to [step 11](#).
 - 14 Click the **Finish** button to add the Session Server.

Once the Session Server is added, a message appears in the status bar of the wizard as in the following screen shot:



The Session Server NE with the specified name is added as a map symbol to the **Network Elements** topology panel. It is also added to the **Session Server** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The Session Server NE can be added using Integrated EMS Web Client. For details, refer to [Adding a Session Server NE](#) procedure.

Adding a Centrex IP Client NE (CICM NE)

Centrex IP Client NE (CICM NE) is managed by CICM Manager. This procedure describes how to add the CICM NE. The CICM NE is added as a map symbol in the **Network Elements** topology panel and **CICM** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

Required prerequisites for Integrated EMS to receive CICM fault and performance data

CICM Manager must be configured to send fault data to Integrated EMS. The CICM has a script called **snmpri_configure** which is used to configure the CICM with Integrated EMS server virtual IP address and port for sending the fault data to Integrated EMS; without this configuration, Integrated EMS receives no faults from CICM.

Required prerequisites for launching CICM Manager

The prerequisites for launching the CICM Manager are:

- CICM Manager has to be configured using **SSPFS CLI** tool for launching CICM Manager from Integrated EMS Client. For details, refer to *ATM/IP Solution-level Configuration Management*, NN10409-500.
- CICM Manager can be launched only in Microsoft Windows with default browser configured as Microsoft Internet Explorer.

Adding CICM NE using Java Web Start Client

The following list provides the operations available for CICM NE in Integrated EMS.

Tasks Supported in Integrated EMS for CICM NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	Yes	No
Managing or unmanaging the object	Yes	Yes
Fault Management		

Tasks Supported in Integrated EMS for CICM NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Viewing associated events or alarms	Yes	No
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	Yes	No
Resynchronizing inventory	Yes	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Others operations		
Launching corresponding applications	Yes	No

To add the CICM NE to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Tools-->Add-->EMS/NE** menu command to invoke the Add EMS/NE wizard.

- 3 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Wizard

Field	Description
Host Name/IP Address	The field for the host name or IP address of the Element NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 4 Select "NE" from the **Type** list box.
- 5 Select "CICM" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the NE unit mode from the **Mode** list box. If "Duplex" mode selected, follow these steps:
- a Enter the inactive unit IP in the **Inactive Unit IP** field,
 - b Enter the Card B IP address in the **Card B IP Address** field.
 - c Enter the Card B display name in the **Card B Display Name** field.
- 8 Enter the card location in the **Card Location** field.
- Note:** The card location entered while adding the corresponding CICM Manager must be provided in the **Card Location** field for CICM NE.
- 9 Click the **Next** button to proceed to the Fault Interface screen in the wizard.
- 10 Enter the port (in which the EMS communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 11 Enter the community in the **Community** field.
- 12 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the

SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name

If you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name
- Authentication Protocol

If you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name
- Authentication Protocol
- Privacy Password

- 13 Click the **Next** button to proceed to the Performance Interface screen in the wizard.
- 14 Repeat [step 10](#) to [step 12](#).
- 15 Click the **Finish** button to add the CICM NE.

Once the CICM NE is added, a message appears in the status bar of the wizard as in the following screen shot:



The CICM NE with the specified name is added as a map symbol to the **Network Elements** topology panel. In addition, a topology node named **CICM NE** with the specified display name in brackets is added under the **Network Elements** topology node in the Integrated EMS tree.

The CICM NE can be added using Integrated EMS Web Client. For details, refer to [Adding an CICM NE](#) procedure.

Adding CS 2000 Core and Call Agent Core NEs

Integrated EMS discovers the CS 2000 Core and Call Agent Core NEs automatically when its corresponding CS 2000 Core manager is added to the Integrated EMS topology. Refer to [Adding a Communication Server 2000 Core Manager \(CS 2000 Core Manager\)](#) procedure to add a CS 2000 Core Manager. The CS 2000 Core and Call Agent Core NEs are added as map symbol in the **Network Elements** topology panel. Also, CS 2000 Core and Call Agent Core NEs are added as map symbol in **CS 2000 Core** and **Call Agent Core** topology panel respectively under the **Network Elements** topology node in the Integrated EMS tree. When the Call Agent Core NE is added, the corresponding Call Agent platform is discovered automatically. The Call Agent platform is added in the Call Agent Platform topology node (under the **Networks Elements-->Call Agent Core** node) in the Integrated EMS tree.

Note: As CS 2000 Core and Call Agent Core are managed by CS 2000 Core manager, the CS 2000 Core and call agent core event correlation is against the cs2k core manager.

The following list provides the operations available for CS 2000 Core and Call Agent Core NEs in Integrated EMS.

Tasks Supported in Integrated EMS for CS 2000 Core and Call Agent Core NEs

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	No	No
Managing or unmanaging the object	No	No
Fault Management		
Viewing associated events	No	No
Clearing alarms	No	No
Deleting alarms	No	No

Tasks Supported in Integrated EMS for CS 2000 Core and Call Agent Core NEs

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

Adding MCS and Media Proxy NEs

Integrated EMS discovers the MCS (or MCS/CSE) and Media Proxy NEs automatically when its corresponding MCS manager is added to the Integrated EMS topology. Refer to [Adding a Multimedia Communication Server Manager \(MCS Manager\)](#) procedure to add an MCS Manager. The MCS or Media Proxy NEs are added as a map symbols in the **Network Elements** topology panel. Also, MCS or Media Proxy NEs are added as a map symbols in **MCS/CSE IX** or **Media Proxy** topology panel respectively under the **Network Elements** topology node in the Integrated EMS tree.

Prerequisites for Integrated EMS to receive MCS fault and performance data

MCS must be configured to send fault and performance data to Integrated EMS. Without this configuration, Integrated EMS receives no fault and performance data from Session Server NEs.

Tasks supported by Integrated EMS for MCS and Media Proxy NE objects.

The following list provides the operations available for MCS and Media Proxy NEs in Integrated EMS.

Tasks Supported in Integrated EMS for MCS and Media Proxy NEs

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	No	No
Managing or unmanaging the object	No	No
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes

Tasks Supported in Integrated EMS for MCS and Media Proxy NEs

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

Note: The resync of alarms is supported through the MCS manager.

Adding an GWC NE

Integrated EMS discovers the GWC NE automatically when its corresponding GWC manager is added to the Integrated EMS topology. Refer to [Adding a Gateway Controller Manager \(GWC Manager\)](#) procedure to add a GWC manager. The GWC NE are added as map symbols in the **Network Elements** topology panel. Also, GWC NE are added as map symbols in **GWC** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The following list provides the operations available for GWC NE in Integrated EMS.

Tasks Supported in Integrated EMS for GWC NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	No	No
Managing or unmanaging the object	No	No
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No

Tasks Supported in Integrated EMS for GWC NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

Note: The resync of alarms is supported through the GWC manager.

Adding an MG 9000 NE

Integrated EMS discovers the MG 9000 NE automatically when its corresponding MG 9000 manager is added to the Integrated EMS topology. Refer to the [Adding a Multi-Service Gateway 9000 Manager \(MG 9000 Manager\)](#) procedure to add a MG 9000 manager. The MG 9000 NE are added as map symbols in the **Network Elements** topology panel. Also, MG 9000 NE are added as map symbols in **MG 9000** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The following list provides the operations available for MG 9000 NE in Integrated EMS.

Tasks Supported in Integrated EMS for MG 9000 NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	No	No
Managing or unmanaging the object	No	No
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No

Tasks Supported in Integrated EMS for MG 9000 NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	Yes (only for version 8.0)	No
Other operations		
Launching corresponding applications	No	No

Note: The resync of alarms is supported through the MG 9000 manager.

Updating RADIUS secret password

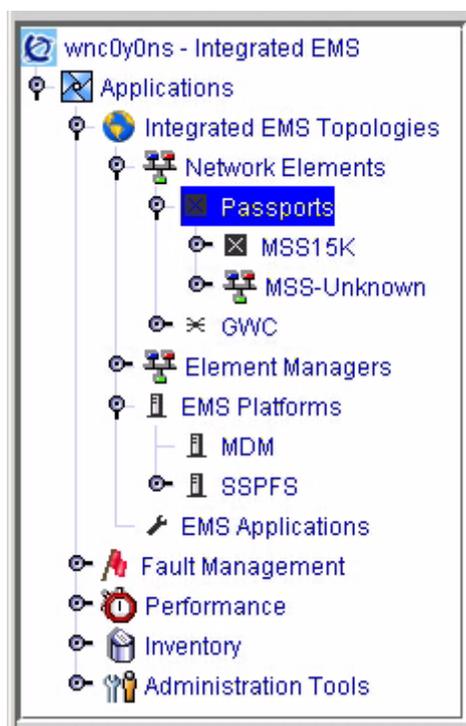
To update the RADIUS secret password for MG 9000 NE objects 8.0, follow these steps:

At Integrated EMS workstation

- 1 Select the **Network Elements** topology panel in the Integrated EMS tree.
- 2 Right-click the Passport 8600 map symbol and select **Update RADIUS secret** menu item.
The Radius Secret Configuration window is invoked.
- 3 Enable the **RADIUS Secret** field and type the RADIUS secret password in the text field.
- 4 Click the **Modify** button.
- 5 Click the **Close** button to close the Radius Secret Configuration window.

Adding PVG 7480/15000 and MSS 15000 NEs

Integrated EMS discovers the Passport NEs (such as PVG 7480/15000 and MSS 15000 NEs) automatically when its corresponding MDM is added to the Integrated EMS topology. To add an MDM, refer to [Adding a Multi-Service Data Manager \(MDM\)](#) procedure. The Passport NEs are added as map symbols in the **Network Elements** topology panel. Also, Passport NEs are added as map symbols in **PVG 7480/15000** and **MSS 15000** topology panel respectively under the **Passports** node of **Network Elements** topology node in the Integrated EMS tree as in the following screen shot. Under the **Passports** topology, the MSS 15000 NEs are added in the **MSS15K** topology and MSS NEs unknown to MDM are added in the **MSS-Unknown** topology.



Note: For the NEs and MDM automatically discovered by MDM, the display name of the map symbol is appended with the parent MDM name in brackets.

The following list provides the operations available for PVG 7480/15000 and MSS 15000 NEs in Integrated EMS.

Tasks Supported in Integrated EMS for PVG 7480/15000 and MSS 15000 NEs

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	No	No
Managing or unmanaging the object	No	No
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	No	No
Report job	No	No
Transfer job	No	No
Configuring thresholds	No	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

Note: The resync of alarms is supported through the MDM.

Adding an SAM21 NE

Integrated EMS discovers the SAM21 NE automatically when its corresponding SAM21 manager is added to the Integrated EMS topology. Refer to [Adding an SAM21 Manager](#) procedure to add a SAM21 manager. The SAM21 NEs are added as map symbols in the **Network Elements** topology panel. Also, SAM21 NEs are added as map symbols in **SAM21** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The following list provides the operations available for SAM21 NE in Integrated EMS.

Tasks Supported in Integrated EMS for SAM21 NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	No	No
Managing or unmanaging the object	No	No
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No

Tasks Supported in Integrated EMS for SAM21 NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

Note: The resync of inventory is supported through the SAM21 manager.

Adding an UAS NE

Integrated EMS discovers the UAS NE automatically when its corresponding UAS manager is added to the Integrated EMS topology. Refer to [Adding an Universal Audio Server Manager \(UAS Manager\)](#) procedure to add a UAS manager. The UAS NEs are added as map symbols in the **Network Elements** topology panel. Also, UAS NEs are added as map symbols in **UAS** topology panel under the **Network Elements** topology node in the Integrated EMS tree.

The following list provides the operations available for UAS NE in Integrated EMS.

Tasks Supported in Integrated EMS for UAS NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuration Management		
Editing object properties	Yes	Yes
Updating status	No	No
Managing or unmanaging the object	No	No
Fault Management		
Viewing associated events or alarms	Yes	Yes
Clearing alarms	No	No
Deleting alarms	Yes	Yes
Resynchronizing alarms	No	No
Resynchronizing inventory	No	No
Performance Management		
Data collection job	Yes	No
Report job	Yes	No
Transfer job	Yes	No

Tasks Supported in Integrated EMS for UAS NE

Task in Integrated EMS	Availability	
	Java Web Start Client	Web Client
Configuring thresholds	Yes	No
Security		
Centralized authentication and authorization (RADIUS client)	No	No
Other operations		
Launching corresponding applications	Yes	No

Note: The resync of alarms is supported through the UAS manager.

Editing properties of objects

The following properties of an object can be modified after they are added to the topology.

- Display name
- Managed or Unmanaged
- Time zone
- Poll interval
- Fault interface and performance interface details, such as port, user ID, community (only applicable to the element manager and NE objects).

The following procedures describe how to edit the above properties for an object in Integrated EMS Client.

- [Editing platform object properties](#)
- [Editing element manager object properties](#)
- [Editing EMS application object properties](#)
- [Editing NE object properties](#)

To edit the properties of an object, follow these steps:

At a topology screen of Integrated EMS Client

- 1 Launch the Object Properties wizard.
- 2 Edit the EMS/NE details listed below
 - Display name
 - Managed/Unmanaged
 - Time zone
 - Poll interval

Note: [step 3](#) to [step 6](#) are applicable only to element managers and NEs.
- 3 Click the **Next** button.
- 4 Modify the fault interface details if required.
- 5 Click the **Next** button.
- 6 Modify the performance interface details if required.
- 7 Click the **Modify** button to modify the object properties.

When successfully updated, the status bar of Integrated EMS Client main screen displays “Successfully updated to database”.

If the EMS/NE details are not updated in the topology, a message appears in the status bar of the wizard as shown in the following screen shot.



Note: The modified or deleted object name and its IP address can be viewed in the log messages displayed in the **Security Log** window invoked through the **Tools** menu command.

Editing platform object properties

After adding an EMS platform to Integrated EMS, the added EMS platform object properties can be modified. This procedure describes how to edit the properties of the following EMS platforms:

- SSPFS
- MDM

Note: Only the Display Name property for the SDM platform can be modified. To edit the display name, double-click the required SDM platform map symbol and change the name and click the **Modify** button.

Editing platform object properties

To edit the platform object properties in Integrated EMS, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **EMS Platforms** panel under the Integrated EMS tree in which the required map symbol is shown.
- 3 Select the required platform map symbol in the **EMS Platforms** panel and double-click to launch the Object Properties wizard.
- 4 Edit the following properties if required. For description of the properties, refer to the following table:

Description of fields in Object Properties Wizard for platform objects

Field	Description
Display Name	The name displayed in the topology for the map symbol.
Managed	Indicates whether the object is managed or unmanaged.
IP-Address	The IP address of the platform host. Note: If the IP address is modified and updated, Integrated EMS deletes the existing details of the platform object and adds new object with details provided in the Object Properties wizard screen.

Description of fields in Object Properties Wizard for platform objects

Field	Description
Time Zone	The time zone associated with the Host Name or IP Address provided.
Device Version	The version of platform.
Poll Interval	The Poll Interval for status updates and the interval to check whether the host is active or not. This field not editable for SN06.2 SSPFS platform objects. The poll interval value must be in the range 30 to 3600 or 0. If the value 0 is specified, the polling is disabled, and the status of the object can be updated using Updating status of objects manually .

- Click the **Modify** button to modify the platform object properties.
Once the platform object properties is updated in topology, a message appears in the status bar of the wizard as in the following screen shot:



Up-versioning the platform objects

The platform objects can be upgraded to higher versions using the following procedure. For platforms supporting the Centralized authentication and authorization (RADIUS client), the following procedure explains the steps for up-versioning.

To upgrade platform managed objects to a higher version, follow these steps:

At Integrated EMS workstation

- Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- Select the **EMS Platforms** topology panel in the Integrated EMS tree.
- Select the required map symbol and double-click to invoke the Managed Object Properties Wizard.
- Change the version of the platform to a higher version from the **Version** list box.

- 5 Click the **Modify** button to modify the manager object properties.

After upgrading the version of SSPFS objects from 6.2 or 7.0 to 8.0, follow these steps:

At Integrated EMS workstation

- 1 Select the **EMS Platforms** topology panel in the Integrated EMS tree.
- 2 Right-click the SSPFS map symbol and select **Update Radius secret** menu item.
The Radius Secret Configuration window is invoked.
- 3 Enable the **Radius Secret** field and type the RADIUS secret password in the text field.
- 4 Click the **Modify** button.
- 5 Click the **Close** button to close the Radius Secret Configuration window.

Editing element manager object properties

After adding a Nortel Networks Element Manager to Integrated EMS, you can modify the Element Manager object properties. This procedure describes the how to edit the Element Manager object properties of the following element managers:

- APS manager
- CS 2000 Core Manager
- CEM
- MCS Manager
- FPM
- GWC Manager
- MG 9000 Manager
- MDM
- SAM21 Manager
- UAS Manager
- CICM Manager

Note 1: [step 5](#) and [step 6](#) in the following procedure are applicable to following element manager objects.

- CS 2000 Core Manager
- MG 9000 Manager
- MDM

[step 7](#) and [step 8](#) are applicable only to MG 9000 Manager and MDM.

Note 2: The version of MCS Manager 8.0 cannot be modified to 7.0 or the other way round. If you want to upgrade the version of MCS Manager 7.0 to 8.0, delete the MCS Manager 7.0 and add a MCS Manager 8.0 with the same details.

Note 3: After adding an MCS Manager, the fault interface and performance details are associated to corresponding physical SM servers which are added in the MCS SM(XXX) node (MCS SM node with the parent MCS Manager display name) under the Element Managers topology. Hence the fault interface and performance details cannot be modified for MCS Manager map symbol in the Element Managers topology. It can be modified only for corresponding physical SM servers in MCS SM(XXX) node. If you try

to edit the managed object properties of an MCS Manager, the **Next** button is disabled in Object Properties wizard.

Editing the element manager managed object properties

To edit an element manager object properties in Integrated EMS, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Element Managers** topology panel in the Integrated EMS tree.

Note: For FPM or MCS Manager, select the corresponding node (MCS_FPM(<parent MCS display name>:<FPM display name>) or MCS SM(XXX) node, where XXX is the display name) under the Element Managers topology.
- 3 Select the required map symbol and double-click to invoke the Managed Object Properties Wizard.
- 4 Edit the following properties if required. The description of the properties is shown in the following table.

Field	Description
Display Name	The name displayed in the topology for the map symbol.
Managed	Indicates whether the object is managed or unmanaged
Platform	Indicates the element manager to which the object belongs.
IP-Address	The IP address of the element manager host. Note: If the IP address is modified and updated, Integrated EMS deletes the existing details of the element manager object and adds a new object with details provided in the Object Properties wizard screen. This is not applicable for MCS Manager objects as only the details are updated for MCS Manager objects.
Time Zone	The time zone associated with the Host Name or IP Address provided.

Field	Description
Device Version	The version of element manager.
Poll Interval	The Poll Interval for status updates, and the interval for checking the connection to determine whether the host is active. If the value 0 is specified, the polling is disabled and the status of the object can be updated using Updating status of objects manually .

- 5 Click the **Next** button.
- 6 Modify the fault interface details if required.
- 7 Click the **Next** button.
- 8 Modify the performance interface details if required.
- 9 Click the **Modify** button to modify the manager object properties.
Once the manager object is updated with the provided details in the topology, a message appears in the status bar of the wizard as in the following screen shot:



Up-versioning the element manager objects

The element manager objects can be upgraded to higher versions using the following procedure. For element managers supporting the Centralized authentication and authorization (RADIUS client), the following procedure explains the steps for up-versioning.

To upgrade element manager managed objects to higher version, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Element Managers** topology panel in the Integrated EMS tree.

Note: For FPM or MCS Manager, select the corresponding node (MCS_FPM(<parent MCS display name>:<FPM display name>) or MCS_SM(XXX) node, where XXX is the display name) under the Element Managers topology.

- 3 Select the required map symbol and double-click to invoke the Managed Object Properties Wizard.
- 4 Change the version of element manager to higher version from the **Version** list box.
- 5 Click the **Modify** button to modify the manager object properties.

After upgrading the version of MDM or CS 2000 Manager objects from 6.2 or 7.0 to 8.0, follow these steps:

At Integrated EMS workstation

- 1 Select the **Element Managers** topology panel in the Integrated EMS tree.

If	Do
MDM	follow step 2 to step 9 .
CS 2000 Manager	follow step 2 to step 5 .

- 2 Right-click the map symbol and select **Update Radius secret** menu item.
The Radius Secret Configuration window is invoked.
- 3 Enable the **Radius Secret** field and type the RADIUS secret password in the text field.
- 4 Click the **Modify** button.
- 5 Click the **Close** button to close the Radius Secret Configuration window.
- 6 Right-click the map symbol and select **Change MDM Centralized Account** menu item.
The Configure MDM Centralized Account window is invoked.
- 7 Type the user name in the **UserName** field.
Note: The user name entered in Configure MDM Centralized Account window must be an user belonging to the "emsadm" group.
- 8 Type the password in the **Password** field.
- 9 Click the **OK** button.

Editing EMS application object properties

After adding EMS applications to Integrated EMS, the added EMS application object properties can be modified. This procedure describes how to edit the EMS application object properties for the following objects:

- LMM
- TMM
- OSSGate
- NPM
- QCA
- APS

To edit an EMS application object properties in Integrated EMS, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **EMS Applications** topology panel in the Integrated EMS tree in which the required map symbol is shown.
- 3 Select the required EMS application map symbol and double-click to invoke the Object Properties window.
- 4 Edit the following properties if required.

Field	Description
Display Name	The name displayed in the topology for the map symbol.
Managed	Indicates whether the object is managed or unmanaged
Platform	The EMS application to which the object belongs.
IP-Address	The IP address of the EMS application host. Note: If the IP address is modified and updated, Integrated EMS deletes the existing details of the element manager object and adds the new object with details provided in the Object Properties wizard screen.

Field	Description
Time Zone	The time zone associated with the Host Name or IP Address provided.
Device Version	The version of EMS application.

Note: For all EMS application type objects, the interval provided in the Poll Interval field is not used.

- 5 Click the **Modify** button to modify the EMS application object properties.

Once the EMS application details are updated in the topology, "Done" appears in the status bar of the wizard.

Editing NE object properties

After adding an NE to Integrated EMS, the added NE objects properties can be changed. This procedure describes how to edit the properties of following NE objects:

- USP
- Passport 8600
- MS 2000
- STORM
- MAS
- Session Server
- CICM

Note: Only the poll interval, managed, and IP address values can be modified for the following automatically discovered NEs.

- CS 2000 Core
- Call Agent Core
 - Call Agent Platform
- MCS
- Media Proxy
- PVG 7480/15000
- MS 15000
- GWC
- MG 9000
- SAM21
- UAS

Editing the NE managed object properties

To edit the NE object properties in Integrated EMS, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).

- 2 Select the **Network Elements** topology panel in the Integrated EMS tree in which the required map symbol is shown.
- 3 Select the required NE map symbol and double-click to invoke the Object Properties Wizard.
- 4 Edit the following properties if required.

Field	Description
Display Name	The name displayed in the topology for the map symbol
Managed	It indicates whether the object is managed or unmanaged
Platform	The NE to which the object belongs
IP-Address	The IP address of the NE host. Note: If the IP address is modified and updated, Integrated EMS deletes the existing details of the NE object and adds the new object with details provided in the Object Properties wizard screen
Time Zone	The time zone associated with the Host Name or IP Address provided
Device Version	The version of NE
Poll Interval	The Poll Interval for status updates, and the interval for checking the connection to know whether the host is active or not. If the value 0 is specified, the polling is disabled, the status of the object can be updated using Updating status of objects manually

- 5 Click the **Next** button.
- 6 Modify the fault interface details if required.
- 7 Click the **Next** button.
- 8 Modify the performance interface details if required.
- 9 Click the **Modify** button to modify the NE object properties.
Once the NE object properties is updated in topology, a message appears in the status bar of the wizard as in the following screen shot:



Up-versioning the NE objects

The NE objects can be upgraded to higher versions using the following procedure. For NEs supporting the Centralized authentication and authorization (RADIUS client), the following procedure explains the steps for up-versioning.

To upgrade NE managed objects to a higher version, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Network Elements** topology panel in the Integrated EMS tree.
- 3 Select the required map symbol and double-click to invoke the Managed Object Properties Wizard.
- 4 Change the version of the NE to a higher version from the **Version** list box.
- 5 Click the **Modify** button to modify the manager object properties.

After upgrading the version of Passport 8600 objects from 6.2 or 7.0 to 8.0, follow these steps:

Note: MG 9000 NE is automatically discovered by MG 9000 Manager. When the parent MG 9000 Manager is up-versioned, the corresponding MG 9000 NEs are automatically updated with default RADIUS secret password.

At Integrated EMS workstation

- 1 Select the **Network Elements** topology panel in the Integrated EMS tree.
- 2 Right-click the Passport 8600 map symbol and select **Update Radius secret** menu item.
The Radius Secret Configuration window is invoked.
- 3 Enable the **Radius Secret** field and type the RADIUS secret password in the text field.
- 4 Click the **Modify** button.
- 5 Click the **Close** button to close the Radius Secret Configuration window.

Configuring and maintaining MS 2000 devices

The MS2000 Configuration and Maintenance tool is used to configure and perform some configuration and maintenance activities on an MS 2010 or MS 2020 NE. It automatically adjusts the display components, behavior, and configuration options based on the NE type (MS 2010 or MS 2020). This section describes configuration and maintenance operations for MS 2000 NEs:

- Configuration
 - [Configuring general parameters for MS 2000 NEs](#)
 - [Configuring SNMP setup for MS 2000 NEs](#)
 - [Configuring the passwords for the MS 2000 NEs](#)
 - [Configuring automated backup of the INI file](#)
- Maintenance
 - [Locking or unlocking the MS 2000 node](#)
 - [Backing up the INI file](#)
 - [Uploading the load files to the Integrated EMS Server](#)
 - [Resetting the MS 2000 NE](#)

User access privileges for MS 2000 NE

The user authorization required for each function is given in the following table:

Access	Function
mg groups with any access	List of any configuration
mgspov, mgrw, mgadm	Change configuration
mgmtc, mgrw, mgadm	Lock or unlock of device
mgmtc, mgrw, mgadm	Backup of INI file
mgmtc, mgrw, mgadm	Upload of load files (CMP, INI, DAT, XML)
mgmtc, mgrw, mgadm	Soft reset of NE

Access	Function
mgadm, mgrw	Change SNMP passwords
mgadm, mgrw	Change web interface passwords

Launching the Maintenance and Configuration tool

To launch the Maintenance and Configuration tool from the Integrated EMS Java Web Start Client, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **MS 2000** topology panel under the **Network Elements** in the Integrated EMS tree in which the required map symbol is shown.
- 3 Right-click a map symbol and select the **Config and Maintenance** tool.

The Maintenance and Configuration tool is launched.

Configuring general parameters for MS 2000 NEs

This procedure describes how to configure the general parameters for basic setup of the MS 2000 node.

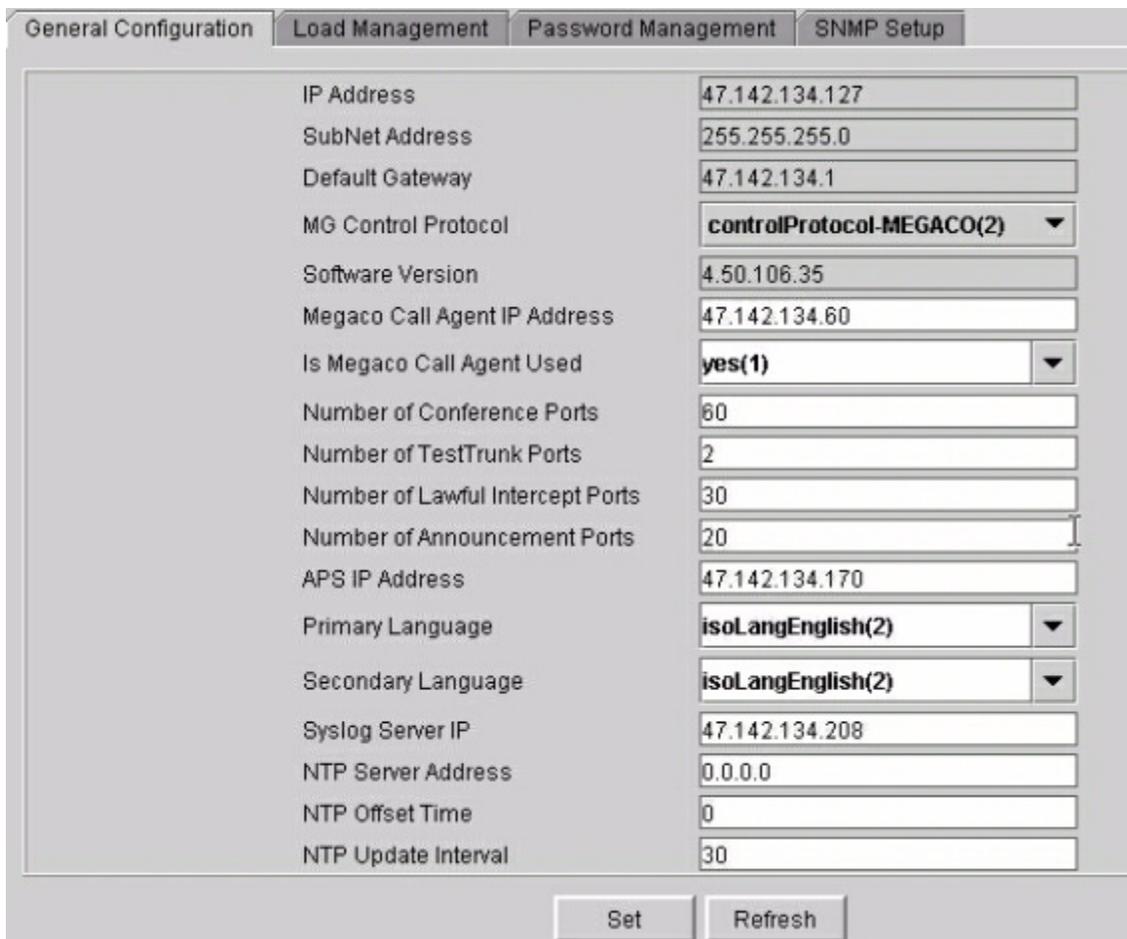
To configure the general parameters, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool](#) of [Configuring and maintaining MS 2000 devices](#).

The Maintenance and Configuration tool is launched.

- 2 Click the **General Configuration** tab in the right side of the Maintenance and Configuration tool, as shown in the following figure.



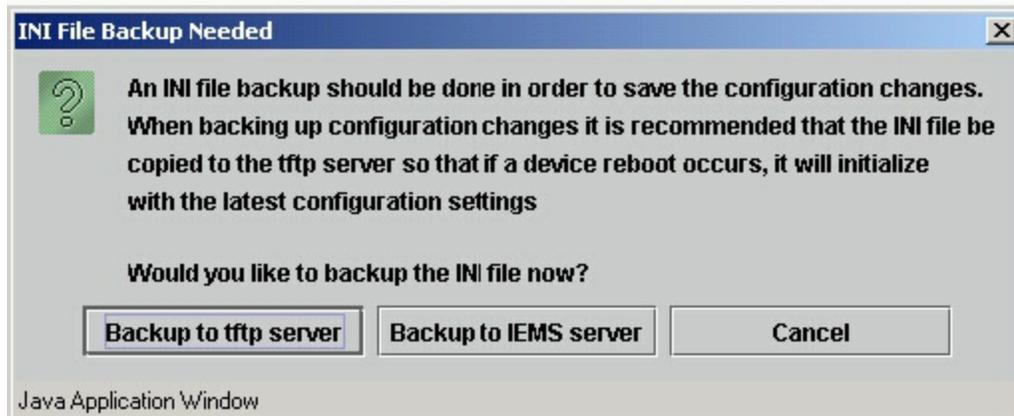
Parameter	Value
IP Address	47.142.134.127
SubNet Address	255.255.255.0
Default Gateway	47.142.134.1
MG Control Protocol	controlProtocol-MEGACO(2)
Software Version	4.50.106.35
Megaco Call Agent IP Address	47.142.134.60
Is Megaco Call Agent Used	yes(1)
Number of Conference Ports	60
Number of TestTrunk Ports	2
Number of Lawful Intercept Ports	30
Number of Announcement Ports	20
APS IP Address	47.142.134.170
Primary Language	isoLangEnglish(2)
Secondary Language	isoLangEnglish(2)
Syslog Server IP	47.142.134.208
NTP Server Address	0.0.0.0
NTP Offset Time	0
NTP Update Interval	30

Buttons: Set, Refresh

- 3 Modify the Megaco Call Agent IP address in the **Megaco Call Agent IP Address** field.
- 4 To indicate whether Megaco Call Agent is used, select "yes" or "no" from the **Is Megaco Call Agent Used** field.
- 5 Enter the number of conference ports in the **Number of Conference Ports** field.
- 6 Enter the number of test trunk ports in the **Number of TestTrunk Ports** field.
- 7 Enter the number of lawful intercept ports in the **Number of Lawful Ports** field.
- 8 Enter the number of announcement ports in the **Number of Announcement Ports** field.
- 9 Enter the APS IP address in the **APS IP Address** field.
- 10 Select the primary language from the **Primary Language** list box.
- 11 Select the secondary language from the **Secondary Language** list box.
- 12 Enter the SYSLOG Server IP address in the **Syslog Server IP Address** field.
- 13 Select the ATM default application type from the **ATM Default Application Type** list box.
- 14 Select the transmission mode from the **Transmission mode** list box.
- 15 Click the **Set** button to save the configuration changes.

If valid data is entered in the each of fields, then you are prompted to save the configuration changes made by backing up the INI file.

If invalid data is entered, a message is displayed similar to the following screen shot:



- 16 Click the **Backup to tftp server** button or **Backup to IEMS server** button. You can back up either to the Integrated EMS Server or to the tftp server.

Once the INI backup is done, you are prompted to perform a soft reset on the node to save the configuration changes to flash memory.

- 17 Click the **Perform Soft Reset** button.

Configuring SNMP setup for MS 2000 NEs

This section describes the following procedures to configure the SNMP setup for the MS 2000 node. Once performed, the procedure allows you to manage the Trusted Managers table and the Trap Destination Table. The MS 2000 node can handle up to five entries in each of these tables. This section consists of two procedures:

- [Configuring Trusted Managers table](#)
- [Configuring Trap Destinations table](#)

Configuring Trusted Managers table

To configure the Trusted Managers table for MS 2000 node, follow these steps:

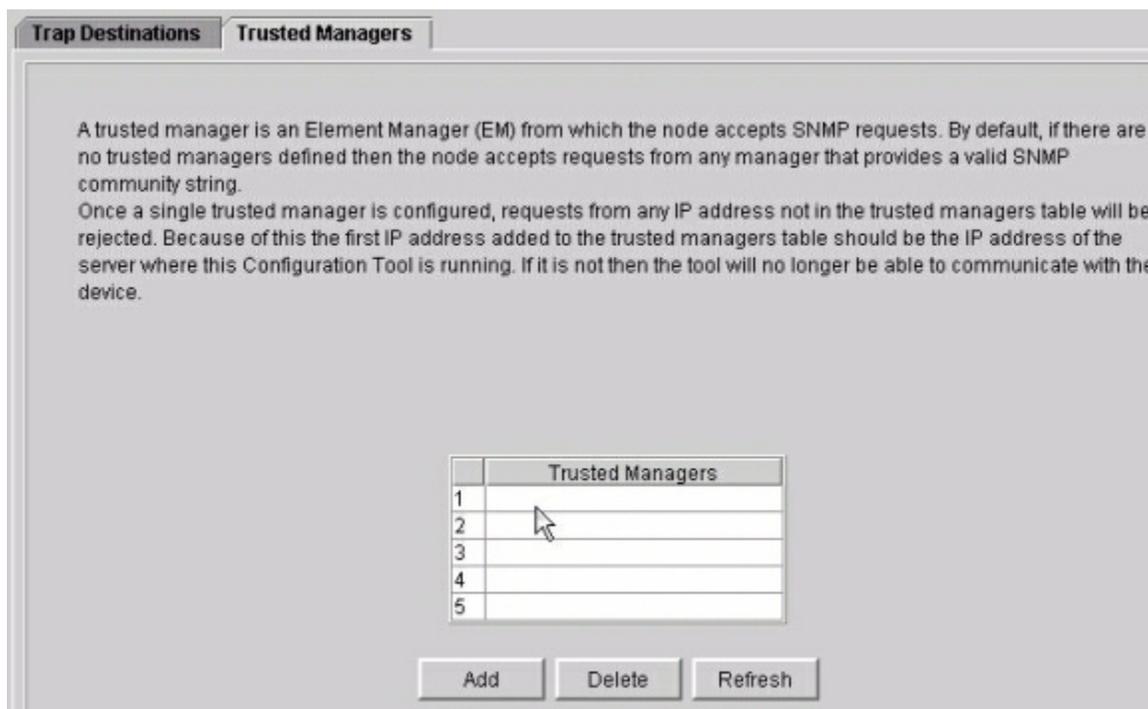
At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool](#) of [Configuring and maintaining MS 2000 devices](#).

The Maintenance and Configuration tool is launched.

- 2 Click the **SNMP Setup** tab in the right side of the screen.
- 3 Click the **Trusted Managers** tab.

The Trusted Managers tab is displayed as in the following figure.



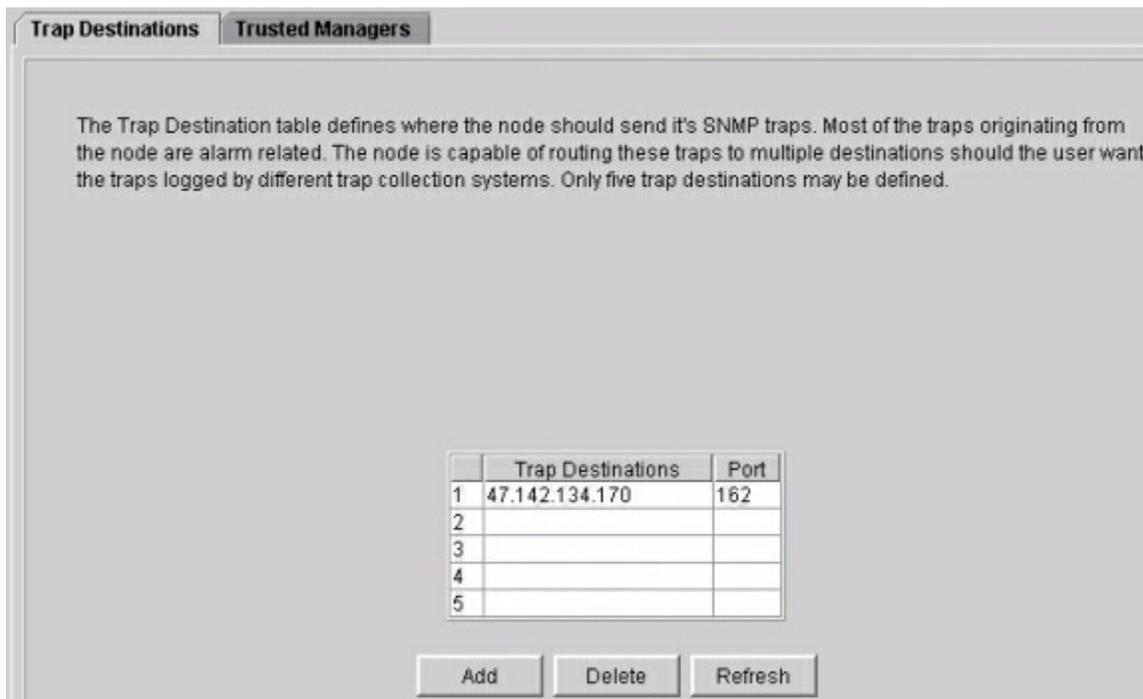
- 4 Enter the manager IPs in the rows under the **Trusted Managers** column.
- 5 Repeat [step 4](#) to add more trusted managers.
- 6 Click the **Add** button.
To remove a trusted manager, enter the trusted manager IP and click the **Delete** button.

Configuring Trap Destinations table

Adding trap destination

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool of Configuring and maintaining MS 2000 devices](#).
The Maintenance and Configuration tool is launched.
- 2 Click the **SNMP Setup** tab in the right side of the screen.
- 3 Click the **Trap Destinations** tab.
The Trap Destination tab is displayed as in the following figure.



- 4 Enter the trap destination IP in the rows under the **Trap Destinations** column.
- 5 Enter the SNMP trap port for the corresponding trap destination under the **Port** column.
- 6 Repeat [step 4](#) and [step 5](#) to add more trap destinations.
- 7 Click the **Add** button.

Deleting trap destination

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool of Configuring and maintaining MS 2000 devices](#).
The Maintenance and Configuration tool is launched.
- 2 Click the **SNMP Setup** tab in the right side of the screen.
- 3 Click the **Trap Destinations** tab.
- 4 Enter the trap destination IPs in the row under the **Trap Destinations** column.
- 5 Enter the SNMP trap port for the corresponding trap destination under the **Port** column.

- 6 Repeat [step 4](#) and [step 5](#) to delete more trap destinations.
- 7 Click the **Delete** button.

Configuring the passwords for the MS 2000 NEs

This section describes the following procedures to configure the SNMP read and write community strings for the MS 2000 node and the Web server user name and password for MS 20000 node. This section consists of two procedures:

- [Configuring SNMP community strings](#)
- [Configuring Web server password](#)

Configuring SNMP community strings

To configure the SNMP community strings for MS 2000 node, refer to the following procedures:

Configuring read community string

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool](#) of [Configuring and maintaining MS 2000 devices](#).

The Maintenance and Configuration tool is launched.

- 2 Click the **Password Management** tab in the right side of the screen.
- 3 Click the **SNMP** tab.

The SNMP tab is displayed as shown in the following figure.

The screenshot shows a web interface for configuring SNMP community strings. At the top, there are two tabs: 'SNMP' and 'Web Server'. Below the tabs is a large text block explaining the purpose of the tool: 'The configuration tool stores the community strings that are used when communicating with the node. This screen allows you to both change the community strings on the node (provided the tool is already communicating with the correct community strings) and stores the updated strings for the tools later use. The password must be alpha-numeric and can be up to 255 characters long.' Below this text are two main panels. The left panel is titled 'Read Community String' and contains two input fields: 'Read String' and 'Confirm', with a 'Change Read String' button below them. The right panel is titled 'Write Community String' and contains two input fields: 'Write String' and 'Confirm', with a 'Change Write String' button below them.

- 4 Enter the same read community string in the **Read String** field.
- 5 Enter the same read community string in the **Confirm** field in the Read Community String panel.
- 6 Click the **Change Read String** button.
The read community string is updated.

Configuring write community string

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool of Configuring and maintaining MS 2000 devices](#).
The Maintenance and Configuration tool is launched.
- 2 Click the **Password Management** tab in the right-side of the screen.
- 3 Click the **SNMP** tab.
- 4 Enter the write community string in the **Write String** field.
- 5 Enter the same write community string again to confirm in the **Confirm** field in the Read Community String panel.
- 6 Click the **Change Write String** button.

The write community string is updated.

Configuring Web server password

To configure the Web server password, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool of Configuring and maintaining MS 2000 devices](#).

The Maintenance and Configuration tool is launched.

- 2 Click the **Password Management** tab in the right side of the screen.

- 3 Click the **Web Server** tab.

The Web Server tab is displayed as in the following figure.

This node runs a password protected web server that is used to perform some configuration and maintenance functions. The configuration tool uses the web server to upload and download files to the node. This screen allows you to change the login name and password used by the node. Changing the login name and password here will change the login name and password on the node and it will store them for the tool to use when communicating with the node. The values must be alpha-numeric and can be up to 7 characters long.

Login Name	<input type="text"/>
Password	<input type="password"/>
ConfirmPassword	<input type="password"/>

- 4 Enter the login name in the **Login Name** field.
- 5 Enter the password in the **Password** field in the Read Community String panel.
- 6 Enter the same password in the **Confirm** field.

- 7 Click the **Change User and Password** button.
The password is updated.

Configuring automated backup of the INI file

The initialization file is a configuration data file used by the MS 2000 system to set up the node in event of a reboot. The automated backup of the INI file can be configured using the Automated INI File Backup Configuration GUI. The INI file backup is configured based on the time and day you specify in the Automated INI File Backup Configuration tool.

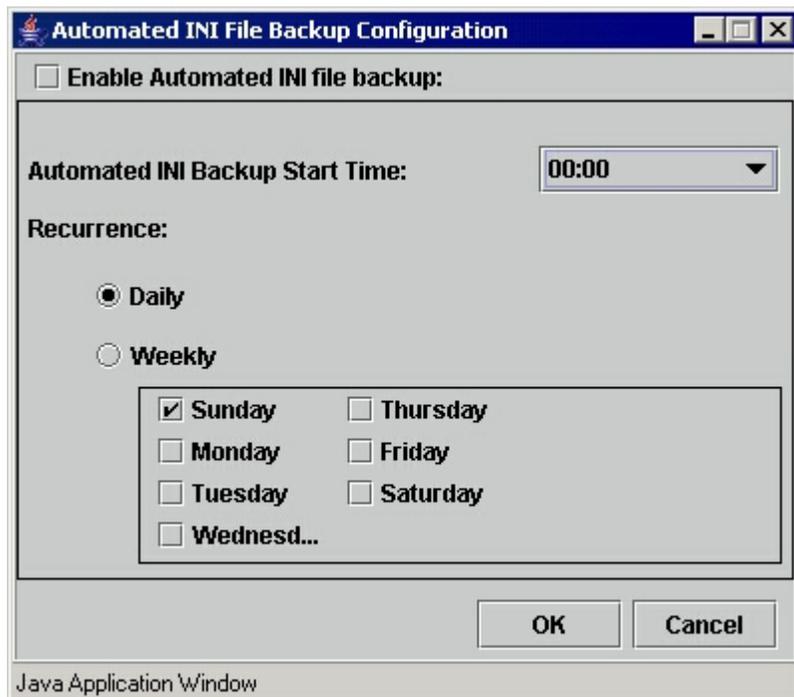
Note: If the proper communication is not setup between the Integrated EMS and the tftp server (SDM or CBM) then the backup of the INI file to the tftp server fails. If file backup failures to the tftp server are seen and you suspect this communication has not been setup, refer to the "Setting up the BootP file on SSPFS".

To configure the automated backup of the initialization file, follow these steps:

At the Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Select the **MS 2000** topology panel under the Network Elements in the Integrated EMS tree in which the required map symbol is shown.
- 3** Right-click a map symbol and select the **Configure MS2000 Automated INI Backup** tool.

The Automated INI File Backup Configuration tool is launched, which is similar to the following figure.



- 4 Check the **Enable Automated INI file backup:** check box to enable the automated INI file backup.
- 5 Select the start time for backup from the **Automated INI Backup Start Time:** list box.
- 6 Select the **Daily** option under Recurrence for daily backup.
OR
Select the **Weekly** option and select the days of the week in which the backup must occur.
- 7 Click the **OK** button.

Locking or unlocking the MS 2000 node

The lock function is to prevent any audio resources from being allocated on the node.

To lock the MS 2000 node, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool](#) of [Configuring and maintaining MS 2000 devices](#).

The Maintenance and Configuration tool is launched. The Maintenance panel in the left side of the Maintenance and Configuration appears similar to the following figure:



- 2 Select the **Graceful Lock** option to lock the MS 2000 node with graceful lock.

Graceful lock

A graceful lock signals to the node that a lock has been requested. The node then stops allocating new audio resources and waits for the last resource to be freed before actually locking the node.

OR

Select the **Forced Lock** option to lock the MS 2000 node with forced lock.

Forced lock

A forced lock causes the node to immediately free up any resources in use and lock the node.

- 3** Click the **Lock** button to lock the MS 2000 node.

To unlock the MS 2000 node, click the **Unlock** button.

Backing up the INI file

The initialization file is a configuration data file used by the MS 2000 system to set up the node in event of a reboot. The file contains all of the user-defined configuration changes. The Maintenance and Configuration tool allows you to save the initialization file back to the Integrated EMS server or to the tftp server (the SDM or CBM). By saving the INI file in the Integrated EMS server, you have simply saved a backup copy of the configuration changes for later use. The Maintenance and Configuration tool saves up to five initialization files for each node, deleting the oldest file once the maximum number of files have been saved. By saving the file to the tftp server, this updates the initialization file that the MS 2000 node retrieves and a hard reset occurs.

To back up the initialization file, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool](#) of [Configuring and maintaining MS 2000 devices](#).

The Maintenance and Configuration tool is launched. The Maintenance panel in the left-side of the Maintenance and Configuration appears similar to the following figure:



The screenshot shows a 'Maintenance' window with the following options and controls:

- Burn Flash
- Don't Burn Flash
- Reset button
- Lock State: unlocked
- Graceful Lock
- Forced Lock
- Lock button
- Backup INI to IEMS Server
- Backup INI to tftp Server
- INI Backup button

- 2 Select the **Backup INI to IEMS Server** option to save the INI file to the Integrated EMS server.

OR

Select the **Backup INI to tftp Server** option to save the INI file to the TFTP server.

Note: It is recommended that whenever configuration changes are made, back up the latest settings in an INI file to the tftp server.

- 3 Click the **INI Backup** button.

Resetting the MS 2000 NE

A soft reset of the node is reinitialization of the software running on the MS 2000 NE. You can select either to burn configuration settings or to re-initialize with the previous burned settings. When a soft reset is done on the node with the burn option, the existing configuration settings are burned into flash memory and then the NE goes through an initialization cycle. This takes the MS 2000 NE out of service for a short period of time and drops any resources in use.

To reset the MS 2000 NE, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool of Configuring and maintaining MS 2000 devices](#).

The Maintenance and Configuration tool is launched. The Maintenance panel in the left side of the Maintenance and Configuration appears similar to the following figure:

Maintenance

Burn Flash
 Don't Burn Flash

Reset

Lock State

Graceful Lock
 Forced Lock

Lock

Backup INI to IEMS Server
 Backup INI to tftp Server

INI Backup

- 2 Select the **Burn Flash** option to reset the MS 2000 NE with the burn option.
OR
Select the **Don't Burn Flash** option to reset the MS 2000 NE without the burn option.
- 3 Click the **Reset** button.

Uploading the load files to the Integrated EMS Server

The MS2000 Configuration and Maintenance tool lets the user to upload some of the file types used by the MS 2000 node. The files displayed in the tool are uploaded from the /data/loads/audiocodes folder of the Integrated EMS Server. The Maintenance and Configuration tool provides an option to remotely reload the device by downloading a CMP load file and an INI initialization file.

To upload the selected files to the Integrated EMS Server, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Maintenance and Configuration tool. For details, refer to [Launching the Maintenance and Configuration tool of Configuring and maintaining MS 2000 devices](#).

The Maintenance and Configuration tool is launched.

- 2 Click the **Load Management** tab in the right-side of the screen similar to the following figure:

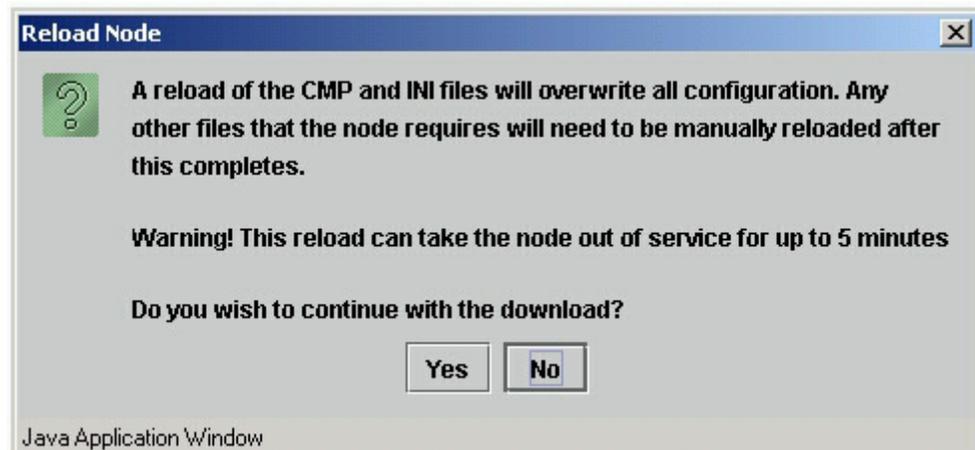
The screenshot displays the 'Load Management' tab of the Maintenance and Configuration tool. It features five distinct sections for uploading files to the node:

- Top Section:** Instruction: "To reload the node select the 'CMP' load and 'INI' initialization files to send to the node". It contains two dropdown menus, both showing "No files of this type found", labeled "CMP File" and "INI File", and a "Send Files" button.
- Second Section:** Instruction: "Select a 'INI' initialization file to send to the node". It contains a dropdown menu showing "No files of this type found" labeled "INI File" and a "Send File" button.
- Third Section:** Instruction: "Select a 'DAT' call progress tones file to send to the node". It contains a dropdown menu showing "No files of this type found" labeled "DAT File" and a "Send File" button.
- Fourth Section:** Instruction: "Select a 'VXML' file to send to the node". It contains a dropdown menu showing "No files of this type found" labeled "VXML File" and a "Send File" button.
- Fifth Section:** Instruction: "Select a 'CAS' file to send to the node". It contains a dropdown menu showing "No files of this type found" labeled "CAS File" and a "Send File" button.

At the top of the interface, there are four tabs: "General Configuration", "Load Management" (which is selected), "Password Management", and "SNMP Setup".

- 3 Select the CMP file to be reloaded and INI file which has to be uploaded from the first panel.
- 4 Click the **Send Files** button in the first panel.

The following dialog is displayed when you select this option:

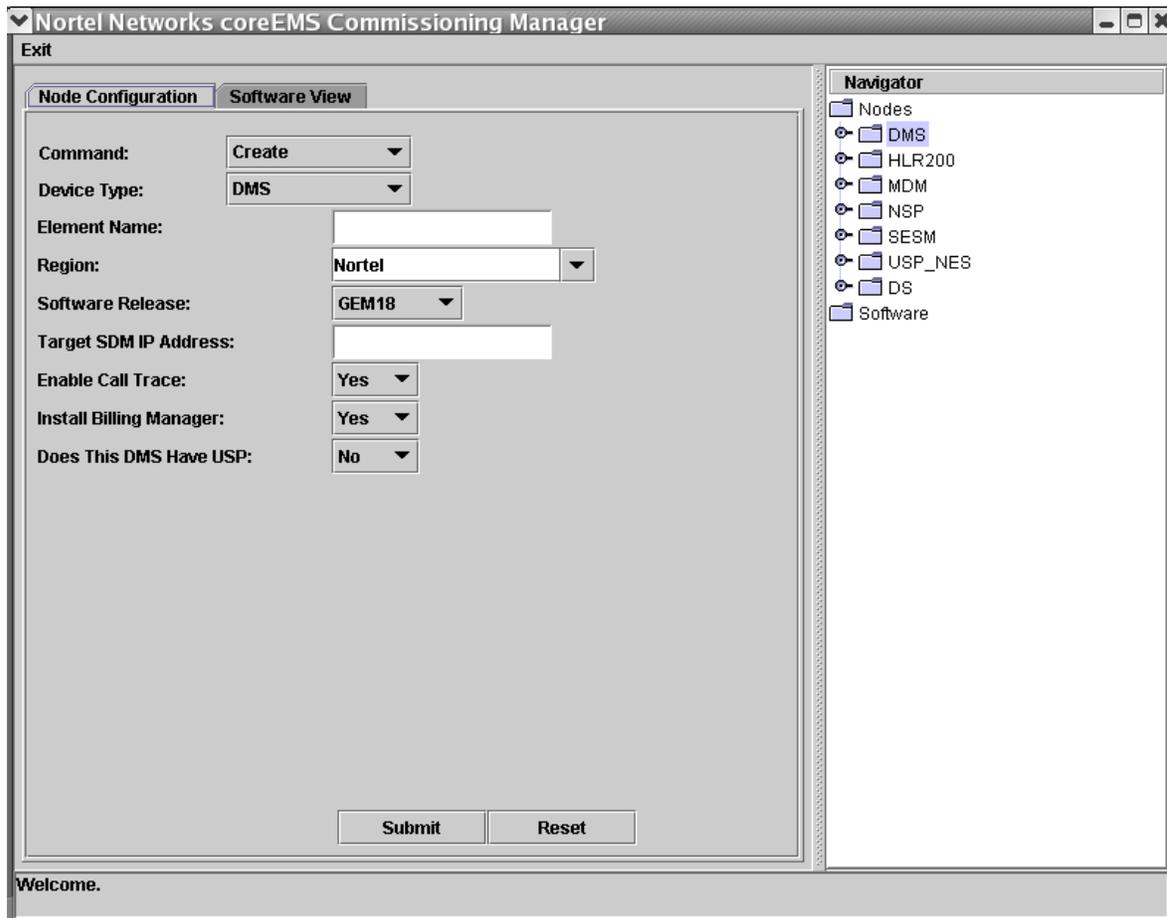


- 5 Click the **Yes** button to reload the CMP and INI files.
- 6 In other panels, select the files to be uploaded from the list box and click the **Send Files** button against the list box.

Working with CEM managed node

This section explains the following procedure to add and delete the CEM managed node. Refer to following procedures for details:

- [Creating a CEM managed node instance](#)
- [Deleting a CEM managed node instance](#)

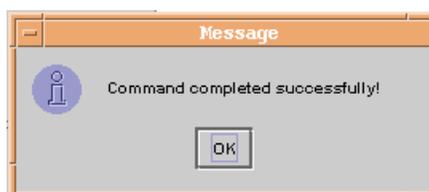


- 2 Click the Node Configuration tab in the coreEMS Commissioning Manager window.
- 3 Select **Create** from the Command drop-down list.
- 4 Select the DMS device type for the new instance from the Device Type drop-down list.
Note: DMS is the only supported option in this configuration.
- 5 Enter the name of the new instance in the Element Name field.
Note: The name can be a string of up to 15 alphanumeric characters and the minus sign (-). The first character must be alphanumeric and the last character must not be a minus sign. The element name cannot be server, localhost, loghost, or the hostname of the local host.
- 6 Enter the target IP address in the Target SDM IP Address field.
- 7 Select GEM18 from the Software Release drop-down list.

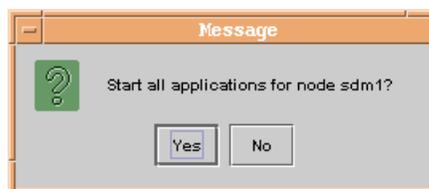
- 8 Select No in the Enable Call Trace drop-down list.
Note: No is the only supported option in this configuration.
- 9 Select No in the Install Billing Manager drop-down list.
Note: No is the only supported option in this configuration.
- 10 Select No in the Does This DMS Have USP field.
Note: No is the only supported option in this configuration.
- 11 Click the **Submit** button.
The following confirmation dialog box opens.



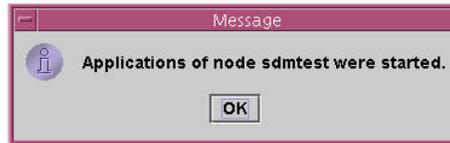
- 12 Click **Yes** in the confirmation dialog box.
The following confirmation dialog box opens.



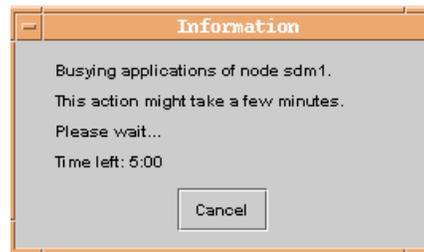
- 13 Click **OK** in the confirmation message box.
- 14 Click **Yes**.
The following dialog box opens.



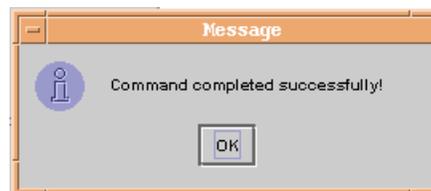
- 15 Click **Yes** to start all applications of the node.
The following dialog box opens.



- 16 Click **OK** in the confirmation dialog box.
- 17 Select **Exit** from the Exit menu to close the CEM Commissioning Manager window.
- 18 You have completed this procedure.



- 7 Wait until the command has completed successfully.
The following dialog box appears.



- 8 Click **OK** in the confirmation dialog box.
The following dialog box appears.



- 9 Click **OK** to clear the message.
- 10 Select **Exit** from the Exit menu to close the CEM Commissioning Manager window.
- 11 You have completed this procedure.

Using the topology operations

This section explains the following procedures to use the various operations in topology GUIs of Integrated EMS Java Web Start Client.

- [Editing and viewing object properties using Java Web Client](#)
- [Updating status of objects manually](#)
- [Managing objects](#)
- [Unmanaging objects](#)
- [Adding custom topology node](#)
- [Searching objects in topology view](#)
- [Viewing the SAM21 Cards](#)
- [Partitioning the NEs discovered by MDM](#)
- [Zooming the topology view](#)
- [Using toolbars in topology view](#)
- [Grouping and ordering map symbols](#)
- [Deleting object and traces](#)
- [Changing topology layout](#)
- [Changing topology background](#)

Editing and viewing object properties using Java Web Client

Application

Use this procedure to edit or view the properties of objects that are displayed in the IEMS topology using Java Web Client.

Prerequisites

None

Action

At the IEMS workstation

- 1 Launch the IEMS Java Web Start Client. Refer to Launching IEMS Java Web Start Client in *Integrated EMS Basics*, NN10329-111.
- 2 Select the required object in the Integrated EMS Topologies tree under Applications.

Note: The properties of an object from the Inventory panel of Integrated EMS tree can also be viewed. To view the Inventory object properties, select the object in the Integrated Topologies tree under Applications to open the Inventory view. Double-click the required row in the Inventory view.

- 3 Right-click the map symbol and select the **Managed Object Properties** menu item or double-click the map symbol to open the Object Properties window.

Note: The object properties displayed can differ for each component.

A window similar to the following figure opens.

Object Properties ----iems-sf2

Base Properties

Name: raghuram-SAM21-Mgr
 Display Name: raghuram
 Type: SAM21 Mgr
 Status: Unknown
 IP-Address: 192 . 168 . 118 . 160
 Platform: None
 Managed:
 Time Zone: Etc/GMT+12
 Device Version: 8.0
 Enable System Unmanage:
 Fault Interface State: NORMAL

Other Properties

Poll Interval (In seconds): 300
 Status Change Time: Tue Mar 01 07:29:43 GMT+05:30 2005

Buttons: Back, Next, Modify, Help, Close, Done

- 4 Modify the object properties listed in the table below if required.

Managed object properties in Java Web Client

Field	Description
Name	Displays a unique name for the object
Display Name	Edit the name displayed in the topology for the object
Type	Displays the type of object (element manager, EMS, EMS platform or NE)
Status	Displays the status of the object
IP-Address	Edit the IP address of the object

Managed object properties in Java Web Client

Field	Description
Platform	Select the platform where the object resides from the drop-down list
Managed	Indicates whether the object is managed or unmanaged
Time Zone	Select the time zone of the geographical location where the object exists from the drop-down list
Device Version	Select the device version of the managed object from the drop-down list
Enable System Unmanage	Enable or disable the System_Unmanaged state. Refer to the System_Unmanaged state section of Configuring the Message Overload Controller parameters in <i>Integrated EMS Fault Management</i> , NN10334-911.
Poll Interval	Edit the Poll Interval for status updates
Status Change Time	Displays the last status change time of the object
<p>Note: For the following objects, only the Display Name and the Managed field can be modified.</p> <ul style="list-style-type: none"> SDM platform, APS EMS application, CS 2000 Core, Call Agent Core, IMX/CSE MX, Media Proxy, Media Gateway 7480/15000, MSS 15000 	

5 Select your next step.

If	Do
you do not want to modify any other properties	go to step 6
you want to view or modify the fault interface or performance interface properties	go to step 8

6 Click the **Modify** button to update the changes.

7 Go to [step 16](#).

8 Click the **Next** button to proceed to the Fault Interface window.
A window similar to the following figure opens.

- 9 Edit or view the fault interface properties of the object as required.

Note: The Details panel dynamically changes according to the fault interface of the EMS/NE.

- 10 Select your next step.

If	Do
you do not want to modify any other properties	step 11
you want to view or modify the performance interface properties	step 13

- 11 Click the **Modify** button to update the changes.

- 12 Go to [step 16](#).
- 13 Click the **Next** button to proceed to the Performance Interface window.

A window similar to the following figure opens.

The screenshot shows a dialog box titled "Object Properties ----Nortel". The main area is labeled "Performance Interface" and contains several sections:

- SNMP Details:**
 - Port: 161
 - Community: (empty text box)
 - Version: v3 (dropdown menu)
- V3 Security Details:**
 - Security Level: NoAuthNoPriv (dropdown menu)
 - User name: v3admin
 - Context name: saul
 - Auth Protocol: MD5 (dropdown menu)
 - Auth Password: (empty text box)
 - Privacy Protocol: CBC-DES
 - Privacy Password: (empty text box)

At the bottom of the dialog, there are four buttons: "Back", "Next", "Modify", and "Help". A "Close" button is also present. A green bar at the very bottom contains the text "Done".

- 14 Edit or view the performance interface properties of the object as required.
- 15 Click the **Modify** button to update the changes.
- 16 You have completed this procedure.

Updating status of objects manually

This procedure describes the steps to update the status of managed objects. Integrated EMS updates the status of managed objects in regular intervals (status polling), but it is possible to update the status of the managed objects manually which interrupts the regular polling. SNMP and CORBA-based devices communicate to Integrated EMS through unreliable streams (without establishing connections). When manually triggering updates for the SNMP or CORBA-based devices is done, Integrated EMS checks whether the communication with the device is active. The color of the map symbols background indicates the severity levels as tabulated below:

Significance of map symbol background color

Background color	Severity level or status
	Critical
	Major
	Minor
	Warning
	Clear
	Unmanaged or unknown object status

Note: For USP NEs, only the active USP unit object provides an interface to determine the fault state of the USP. The inactive USP unit object status is in unknown state (map symbol has gray background color). The Integrated EMS dynamically detects when the USP unit has been swacted. When this occurs, it initiates alarm resync with the newly active USP unit and update the state of the USP unit objects in the Integrated EMS Client to reflect this change in activity. When this occurs, the previous active unit object map is changed to unknown state, and new active unit is updated to reflect the highest alarm state of the USP device. For the color mapping of various object status, refer to [Significance of map symbol background color](#) table of "[Updating status of objects manually](#)".

To manually update the status for a objects, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Select the required topology panel in the Integrated EMS tree. The tree shows the EMSs discovered or added for that type of EMS.
- 3** Select the map symbol for which the update status is required.
- 4** Right-click the selected map symbol and select the **Update Status** menu item.

Progress of update is shown in the status bar. After the status update is complete, a "Status update over" message is displayed in the status bar.

The above procedure can be used to manually trigger updates for NE, EMS application, or platform objects.

Managing objects

Using Integrated EMS Client, a provisioned EMS, NE, application, or platform can be managed or unmanaged. When a provisioned (or discovered) object is being managed, the state of the object is actively updated to reflect the current alarm status. When a device is unmanaged, the state of the device is no longer updated.

Note: When an object is unmanaged, Integrated EMS does not status poll the corresponding object. Also, Integrated EMS does not receive the events and alarms from the unmanaged object and does not forward the events to northbound.

To manage a unmanaged object, follow these steps:

At the Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select a topology panel in the Integrated EMS tree in which the required map symbol is displayed.
- 3 Right-click the required symbol (that needs to be managed) in the topology panel and select the **Manage** menu item.

Managing an object: example

To manage a Core Element Manager (in unmanaged state), follow these steps:

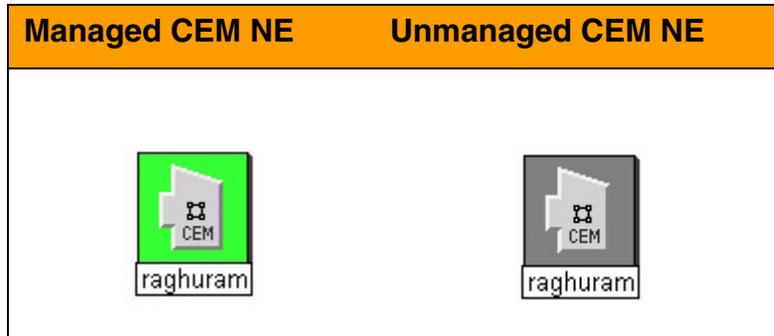
At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Element Managers** topology panel in the Integrated EMS tree in which the required map symbol is displayed.
- 3 Right-click the required CEM map symbol (that needs to be managed) in the **Element Managers** topology panel and select the **Manage** menu item.

Once a selected map symbol is set to be managed, an icon is displayed against the selected map symbol indicating the

severity status of the device. The following figure shows the difference between managed and unmanaged objects.

Difference between Managed and Unmanaged NE



Note: The objects in unknown state and unmanaged state have the same map symbol background color.

Unmanaging objects

Application

Use this procedure to unmanage an object.

Unmanaging an object stops Integrated EMS from monitoring the object.

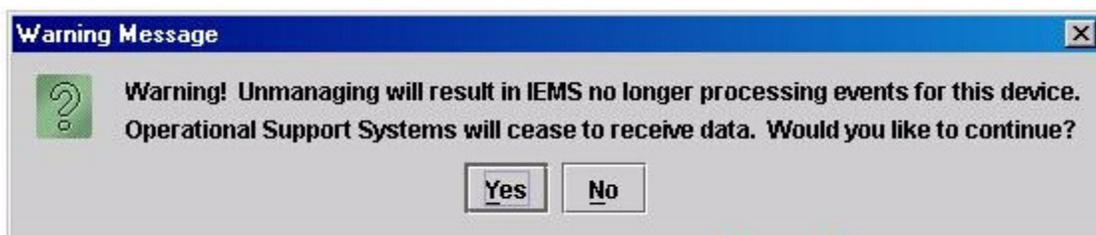
Note: When an object is unmanaged, Integrated EMS does not status poll the corresponding object. Also, Integrated EMS does not receive the events and alarms from the unmanaged object and does not forward the events to a northbound interface.

Action

At the Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select a topology panel in the Integrated EMS tree in which the required map symbol is displayed.
- 3 Right-click the required symbol (that needs to be managed) in the topology panel and select the **UnManage** menu item.

The following warning message is displayed:



- 4 Click the **Yes** button to unmanage the object.
- 5 You have completed this procedure.

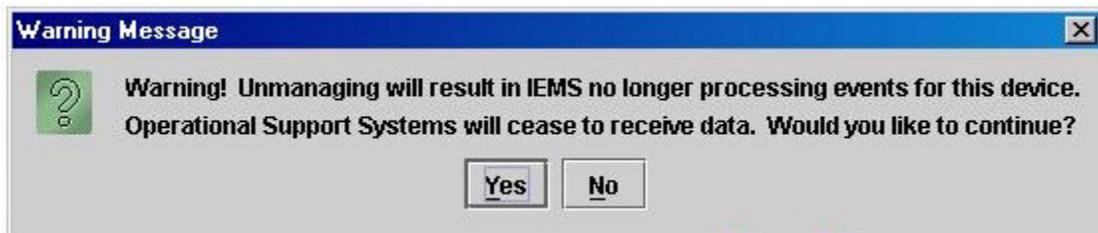
Example of unmanaging an object

At the Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).

- 2 Select the **Element Managers** topology panel in the Integrated EMS tree in which the required map symbol is displayed.
- 3 Right-click the required CEM map symbol (that needs to be unmanaged) in the Element Managers topology panel and select the **UnManage** menu item.
- 4 Right-click the required symbol (that needs to be managed) in the topology panel and select the **UnManage** menu item.

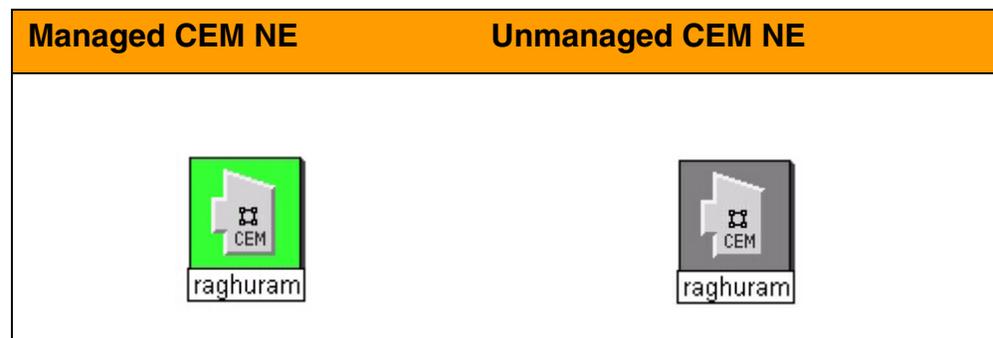
The following warning message is displayed:



- 5 Click the **Yes** button to unmanage the object.

Once a selected map symbol is unmanaged, the status icon in the map symbol becomes gray. The following figure shows the difference between a managed and an unmanaged object.

Difference between a managed and an unmanaged NE



Note: The objects in an unknown state and unmanaged state have the same map symbol background color.

Adding custom topology node

This procedure describes how to add a topology tree node in the Integrated EMS tree. It also describes the custom topology tree node and how it is different from the default topology tree node. Custom topology nodes are useful to filter the map symbols based on specified criterion and have a customized view.

Custom Topology Tree Node: Custom tree topology nodes have some specific criteria, which must be met for the map objects or symbols to be displayed.

Default Topology Tree Node: Default topology tree nodes are those provided automatically by the objects (for example, NEs, element managers, EMS platforms, and EMS applications). Unlike the custom topology node, where map symbols must satisfy certain criterion, the default topology node does not require the map symbols to satisfy any criterion. Any object can be added to a default topology.

To add a custom topology node, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select a topology node in the Integrated EMS tree in which the required map symbol is shown.
- 3 Select the **Custom Views-->Add New Map** to invoke the Add Topology Properties window.
- 4 Enter the details for various fields in the window.
- 5 Specify the criteria (if the topology node is a custom topology node).
- 6 Click the **Add Map** button to add the topology node.

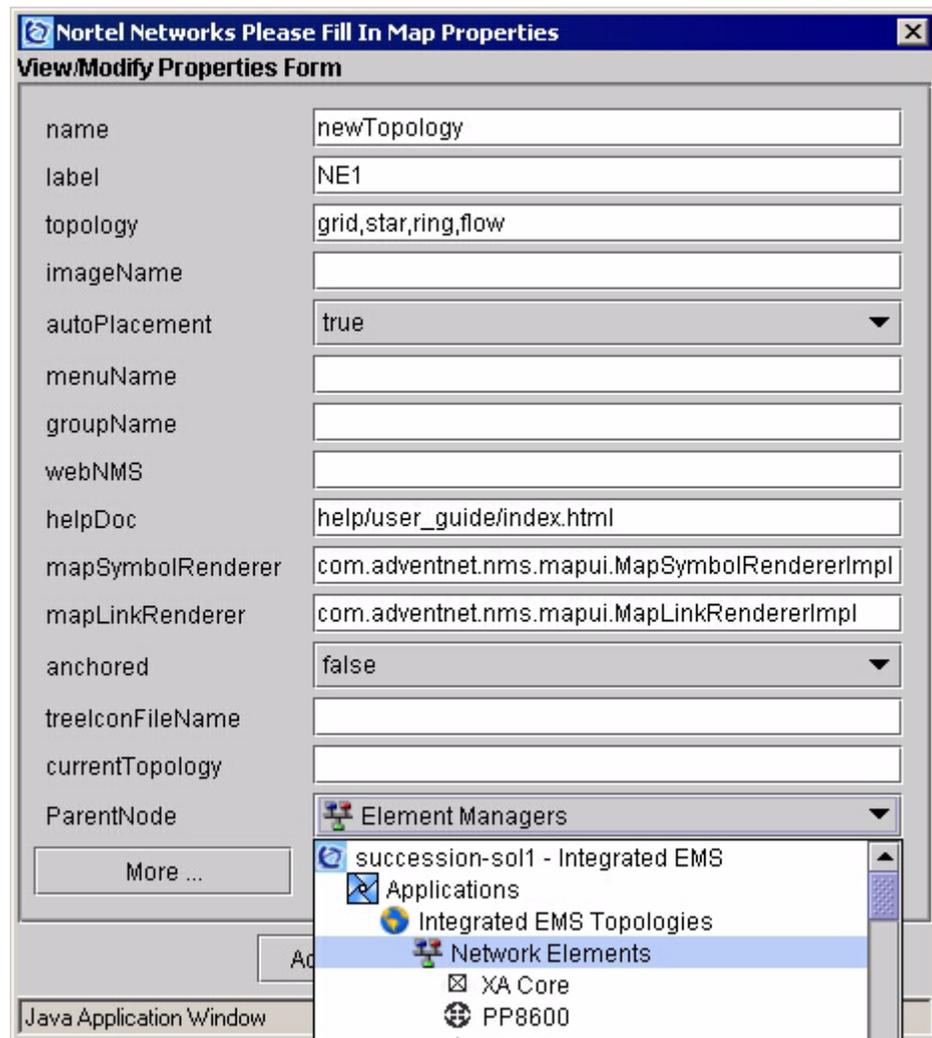
The details to be provided in the View/Modify Properties window are tabulated in the "[Description of fields Add Map Properties Window](#)" table.

The properties window can be displayed; use any one of the methods detailed below.

Various methods to launch Add Topology Properties window

From Toolbar	From Menu bar	Using Shortcut Keys
	Custom Views-->Add New Map	Ctrl+N

The screen shot of the Add Topology Properties window is shown in following figure:



- 7 In the Add Topology Properties window, specify the set of map-related information before adding the topology. The following table provides a description of the fields that need to be completed in the Add Topology Properties window:

Description of fields Add Map Properties Window

Field	Description
name	The name of the topology node that is to be added
label	The display name or label of the topology node. This name is displayed in the tree.
topology	The permissible layouts for the topology. Comma-separated values are permitted. Example grid, star, ring, flow.
imageName	The image file which appears as the background of the topology. The images can be in JPEG or PNG format. The images must be placed under the <Integrated EMS Home>/images directory. Example <i>images/networkmapmain.png</i>
autoplacement	Specifies whether the map symbols in the topology must be arranged according to layout or the default layout. The default value is "true".
menuname	The panel-specific menu file for this topology. The menu files are available under the <Integrated EMS Home>/mapdata/menus directory. Example: mapmenu.xml, nodemenu.xml

Description of fields Add Map Properties Window

Field	Description
mapSymbolRenderer	<p>The renderer that paints the map symbols in the topology canvas. By default, there are 3 map symbol renderers bundled with the product.</p> <p>Symbol Renderers:</p> <p>mapSymbolRendererImpl: On selection of a map symbol, four dark squares appear on the edges of the symbol.</p> <p>mapSymbolRendererImpl_2: On selection of a map symbol, a square box is painted over the symbol.</p> <p>mapSymbolRendererImpl_3: Status of the objects is represented in a small box on the top corner of the symbol. On selection of the symbol, a square box is painted over the symbol. This is the default map symbol renderer used in Integrated EMS Client.</p>
anchored	<p>Specifies whether the anchor property of the topology is "true" or "false".</p> <p>If the anchor property is set to "true", the topology becomes a non-editable topology. That is, the topology components that are added to the topology are not editable.</p> <p>If the anchor property is set to "false", the Topology is a normal editable topology.</p> <p>The default value is "false"</p>
treeIconFileName	<p>The name of the icon file that appears in the client tree against the topology node. The images must be placed under the <Integrated EMS Home>/images directory.</p> <p>Example <i>images/pp8600_tree.png</i></p>
ParentNode	<p>The parent node in the tree is selected from the list box. If the Fault Management node is selected, the topology is added under the Fault Management node in the client tree.</p>

Note: For the imageName fields listed in the above table, the images in the /opt/nortel/iems/current/images directory (where Integrated EMS server is installed) can be used. If required, the images can be copied to the above location and used.

- 8 Completing the criteria** (This step is required if the topology is a custom topology and demands certain criteria to be matched for the objects to be displayed.): Once the topology properties is

entered, click the **More** button to launch the GUI. In this GUI, specify the match criteria. Note that the match criteria can only be any of the properties of the managed object

- 9 Choosing the Save to Server option:** Once all the map-related properties have been specified and the match criteria specified, select the Save to Server check box to save the topology. Enabling this option saves the topology in the corresponding table in the database.
- 10 Adding the Topology Node:** Finally, click the **Add Map** button to add the topology.

Searching objects in topology view

It is possible to navigate through Integrated EMS topology tree to locate a specific object or to search is done using the Find window in Integrated EMS client. This procedure describes how to search map symbols in the topology.

To search for an object map symbol in the Integrated EMS tree, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Navigate to the **Integrated EMS Topologies** node in the Integrated EMS tree.
- 3 Select a topology panel under the **Integrated EMS Topologies** node.
- 4 Launch the **Find** dialog using the **Edit-->Search** menu command or using the **Find** button in the toolbar.

The search screen is similar to the following screen shot:



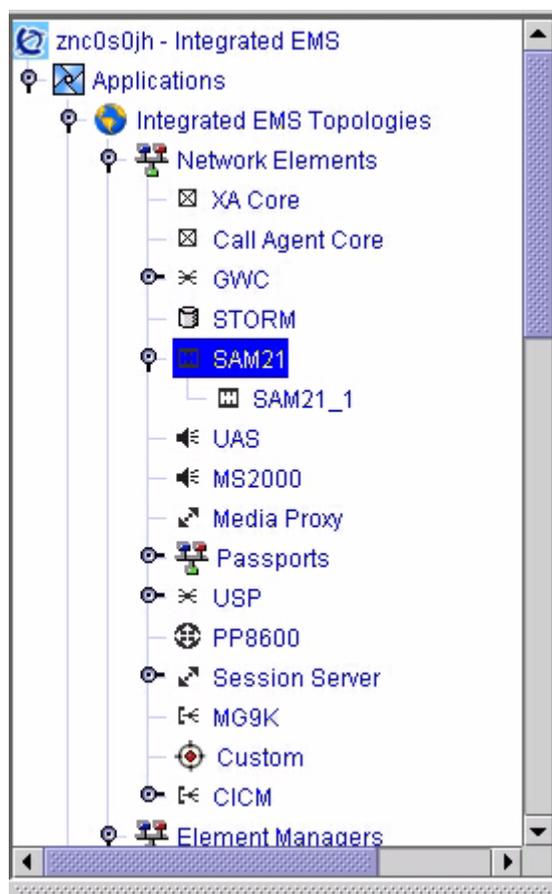
- 5 Enter the label name (part or whole label of the map symbol) in the **Symbol label** field.
- 6 Click the **Find next** button to search for the map symbol with the specified label name.

A particular topology can be skipped by clicking the Next Map button, which moves to the next topology node available in the tree.

The **Up** and **Down** radio buttons are used to specify the direction in which the search is to be performed. Use the **Ignore case** option and **Match whole word** option for an easy search. The **New search** button resets the values to the default. The **Close** button closes the find window and the **Help** button displays this help section.

Viewing the SAM21 Cards

After an SAM21 Manager is added, the corresponding SAM21 NEs are automatically discovered. The SAM21 NE objects are added in **Networks Elements** topology and also in SAM21 topology under the **Network Elements** topology. The SAM21 card arrangement for a SAM21 NE is displayed in the sub-node SAM21_1 under the **SAM21** topology node as in the following figure.



To view the SAM21 cards, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Expand the **Networks Elements** node in the Integrated EMS tree.
- 3 Select the SAM21_1 sub node under the **SAM21** node.

Partitioning the NEs discovered by MDM

When an MDM is added to the topology, the corresponding PVG 7480/15000 and MSS 15000 NEs are discovered by Integrated EMS. These NEs can be unmanaged or made invisible to all the users in the various topologies such as Network Elements, Passports, MSS15K, and MSS-Unknown. This is achieved by partitioning the NEs as managed, unmanaged, or invisible devices in the Partition NEs GUI.

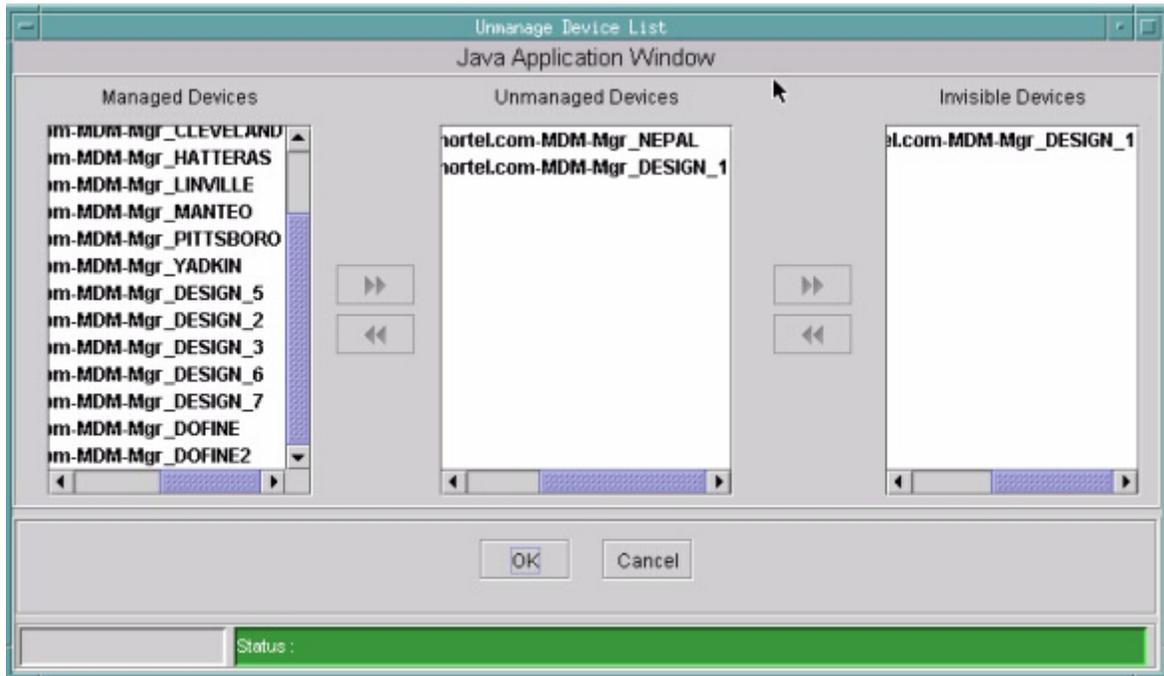
Note: NEs are invisible to all the users in the various topologies, that is, NEs do not appear in the topologies but the details of these NEs are present in the database.

To partition the NEs discovered by MDM, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Select the **Element Managers** topology in the Integrated EMS tree.
- 3** Right-click the MDM map symbol for which the NEs must be partitioned and select **Partition NE's** menu item.

The Partition NEs GUI is launched similar to the following screen shot.



- 4 Select the NE to be unmanaged from the **Managed Devices** list and move it to **Unmanaged Devices** list by clicking the >> button (present next to Managed Devices list).

To move the NE from Unmanaged Devices list to Managed Devices list, select the NE and click the << button (present next to Managed Devices list).

Note: When an object is unmanaged, Integrated EMS does not status poll the corresponding object. Also, Integrated EMS does not receive the events and alarms from the unmanaged objects and does not forward events to northbound.

- 5 Select the NE to be made invisible in the topologies from the **Unmanaged Devices** list and add it to **Invisible Devices** list by clicking the >> button (present between Unmanaged Devices and Invisible Devices list).

Note: You must move the NE to Unmanaged Devices list from Managed Devices and then add it to Invisible Devices list.

Zooming the topology view

The zooming function in the topology of Integrated EMS Client displays an enlarged view of the topology and its components. Map symbols can be zoomed using the Zoom button in the Map toolbar.

To locate the Integrated EMS Topologies node in the Integrated EMS tree, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Navigate to the **Integrated EMS Topologies** node in the Integrated EMS tree.
- 3** Select a topology panel in the **Integrated EMS Topologies** node.

The zoom functionality can be achieved by accessing the zoom tool buttons of the topology toolbar as tabulated below.

Zoom tool buttons

Zoom Tool button Name	Zoom Tool button
Zoom Mode	
Zoom In	

Zoom tool buttons

Zoom Tool button Name	Zoom Tool button
Zoom Out	
Zoom Overview	

Zoom mode: The Zoom Mode tool button enables the zooming of one or more map symbols. To have to select one symbol at a time for zooming, use the Selection tool. Otherwise, select more than one symbol over a given area in the topology and click the Zoom Mode tool. Symbols in the topology cannot be selected when the Zoom Mode tool is enabled.

Zoom in mode: To zoom in on the entire displayed topology, access the corresponding button in the Map toolbar. On clicking the button, the Map zooms in at the center.

Zoom out mode: Zoom out to view the entire topology at its default size by accessing the corresponding button of the Map Toolbar. On clicking the button, the topology back to its original size.

Zoom overview: To view the exact region, which is currently being zoomed in or zoomed out, access the Zoom Overview tool button of the Map Toolbar. On clicking this button, a separate Map Overview window pops up at the left corner of the window, highlighting the area of the Map (with red bars), which is being zoomed. This is useful for locating the exact positions of the map symbols in a Map. In this window, zooming can be adjusted by varying the size of the zoom overview. When the zoom overview window is changed, the zoom overview also varies proportionately.

Using toolbars in topology view

When a topology is selected, two toolbars can be found in Integrated EMS Client, the panel-specific toolbar and the topology toolbar. This procedure describes how to the use of each tool button in the toolbar.

Using panel-specific toolbar

There are a few other options in the main toolbar, which are specific to topologies. These options are called "panel-specific toolbar options" and they are placed between the frame-specific toolbar buttons. If the topology panels, such as Element Managers, EMS Applications, EMS Platforms or Network Elements are selected, the topology toolbar is displayed. For descriptions of panel-specific toolbar options specific to the topology, refer to the following table:

Panel-specific Toolbar Buttons Description

Tool button Name	Tool button	Menu Command	Shortcut Key	Description
Relayout Topology		Custom Views -->Relayout Map	Ctrl+R	When the symbols are moved on the topology canvas, their anchor properties are set to "true". By default, layout does not handle objects whose anchor properties are "true". But if you want to re layout the entire set of objects, including those with anchor properties as "true", then you do a re layout. The relayout action sets the anchor properties of all the symbols to " false" and it repositions them according to the layout calculations.
Undo		Edit-->Undo Add/Delete	Ctrl+Shift+Z	Used to undo the last action.

Panel-specific Toolbar Buttons Description

Tool button Name	Tool button	Menu Command	Shortcut Key	Description
Delete Map		Custom Views-->DeleteMap	Ctrl+D	Deletes selected topology.
Save Map		Custom Views-->Save Map	Ctrl+S	Saves the topology properties and map symbol properties (if symbols are present) to the respective database tables.
Refresh Map		View-->Refresh	F5	Reloads the topology with the previously saved information. If you do some changes on a Topology and then do a refresh, the topology is loaded with the lastly saved information.

Using topology toolbar

Each topology has a toolbar available at the top of the view. This toolbar is used to maintain the managed nodes that are in the context of this view.

To locate the topology toolbar in a topology panel, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Navigate to the **Integrated EMS Topologies** node in the Integrated EMS tree.
- 3 Select a topology panel in the **Integrated EMS Topologies** node, for example: the **Network Elements** topology node.

The topology toolbar is displayed at the top of the selected topology panel.

The topology toolbar icons and their descriptions are in the following table.

Description of tool buttons in topology toolbar

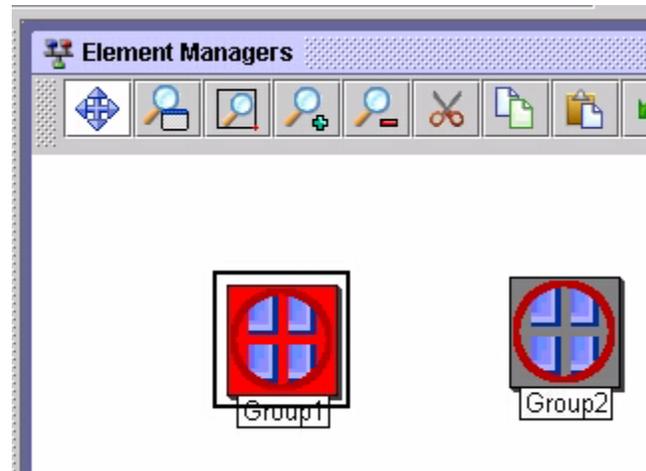
Toolbar Button Name	Toolbar Button	Description
Select		Selects a map symbol in the topology, (indicated by being enclosed within four blocks). Only one map symbol can be selected at a time.
Zoom Overview Window		Displays the Zoom Overview window. First select a map symbol and then click this Zoom Window button. The Zoom Overview window displays the exact location of the selected map symbol in the topology. This option is very useful to find the exact location of the map symbol within the topology.
Zoom Mode		Enables selection of one or more map symbols for zooming.
Zoom In		Obtains an enlarged view of the selected topology. The topology is zoomed from the center of the selection. This button can be selected multiple times to perform multiple zooms.
Zoom Out		Zooms out of the topology view. This button can be selected multiple times to zoom out further.
Cut		Cut any map symbol in the topology view.

Description of tool buttons in topology toolbar

Toolbar Button Name	Toolbar Button	Description
Copy		Copies a map symbol from a topology view ready for pasting to an existing or to a newly created topology view.
Paste		Pastes any map symbol previously cut or copied from a view to an existing topology or to a newly created topology.
Undo		Performs an undo of the most recent action.
Group View		Displays the topology in its default state with map symbols, container, and groups.
Expand Selected Groups		Expands an existing group, displaying all the map symbols within the group.
Group Selected Symbols		Groups the selected map symbols.

Grouping and ordering map symbols

Map symbols are the distinct icons displayed for different object types. The objects can be grouped or ordered. The following procedure describes how to group or order map symbols. A group of map symbols is represented as in following figure.



Grouping map symbols

Grouping map symbols helps to view map symbols representing managed objects connected within a local vicinity or managed objects which share a logical connection.

Grouping based on number of map symbols per group: Open a topology and select the **Edit-->No Of Symbols Per Group** menu command, to group map symbols as per the specified number.

Note: After creating a group, save the map using the **Custom Views-->Save Map** menu command to maintain the state of group.

Grouping based on user preference: To group the map symbols based on user preferences, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the required topology panel in the Integrated EMS tree.

- 3 Select a set of map symbols with combination of Ctrl key and mouse click.
- 4 Group them using the Group Selected symbols tool button in the topology toolbar. A group symbol is displayed in place of the selected symbols. The remaining map symbols remain unaffected.

Flexibility in ungrouping the groups to view map symbols: To view map symbols within a group, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the required topology panel in the Integrated EMS tree.
- 3 Select one or more group symbols.
- 4 Select the Expand Selected (or all) Groups tool button in the topology toolbar to view the symbols in the selected groups in one view (or) double-click on a group symbol to view the map symbols in that group.

The map with group symbols can be saved for future use.

Disabling groups: To disable grouping, select the **Edit-->Disable Grouping** menu command.

Opening a group: To open a group symbol and view the map symbols of a Group, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the required topology panel in the Integrated EMS tree.
- 3 Select one of the grouped map symbol.
- 4 Select the menu **Group-->Open Group** from the menu bar [or] right-click the group symbol and select the context-sensitive menu option OpenGroup. Double-clicking the group symbol can also open the group.

Save Changes On Server Option: The Save Changes On Server option in the group symbol property form, saves only the group properties in the server. Consequently the server is not aware of the

symbols present inside the group. After saving the group, and performing a refresh (or when the client is next started), the group is present but none of the symbols are shown.

To retain the symbols inside the group, the symbols' groupName property must be updated with the respective group name. This can be performed by either:

- saving the map using the Custom Views-->Save Map menu command
- OR
- using the Save Changes On Server option for every map symbol present inside the group.

Ordering map symbols

The map symbols can be sorted in an orderly manner by using the **Edit-->Order By** menu option. The map symbols can be sorted based on the criteria shown in the following table.

Various Criteria Attributes for Ordering Map Symbol

Criteria Attribute	Description
name	Sorts the map symbols based on their names. Order of sorting is A-Z.
label	Sorts the map symbols based on the symbols' label values. Order of sorting is A-Z.
objName	Sorts the map symbols based on the name of the managed object that is represented by the symbol.
status	Sorts the map symbols based on the status of the managed objects represented by the symbols. Order of sorting is from critical to clear.
groupName	Sorts the map symbols based on the name of the group to which they belong.
objType	Sorts the map symbols based on the type of the managed object represented by the symbols.

Deleting object and traces

This procedure describes how to delete an object and traces from the topology.

To remove an object from topology, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Select the required topology panel.
- 3** Right-click the required object or map symbol in the topology and select the **Delete Object and Traces** menu item.

Note: Deleting object and traces from the topology does not remove the events associated with the object. Deleting an object only removes it from the topology and its associated alarms.

Changing topology layout

The topology layout can be changed to grid, star, ring, or flow layout. This procedure describes how to change the topology layout.

To change the topology layout, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Select the required topology. For example, the **Network Elements** topology panel.
- 3** Double-click on the background of the topology.
*The **Map Properties** dialog is displayed.*
- 4** Select the required layout in the **CurrentTopology** list box.
- 5** Click the **Modify** button to save the selection.
- 6** Click the **Close** button to close the **Map Properties** dialog.

Changing topology background

The background displayed for each of the topology can be changed. The backgrounds are images in either PNG or JPEG format. This procedure describes how to change the topology background.

To change the topology background, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Select the required topology panel. For example, **Network Elements** topology panel.
- 3** Double-click on the background of the topology. The **Map Properties** dialog box is displayed.
- 4** Using the file chooser button next to the ImageName field, Select the required image.
- 5** Click the **Modify** button to save the selection.
- 6** Click **Close** button to close the Map Properties dialog.

Note: For the ImageName field specified above, the images in the /opt/nortel/iems/current/images directory is used. If required, the user-defined image files can be copied here and subsequently used.

Working with inventory panel

The Inventory maintains the properties of all Managed objects of a network. These managed objects and their object properties are listed in the Inventory panel. The Inventory panel can be selected from Integrated EMS Tree. You can navigate through the displayed Inventory panel by accessing the navigating buttons, thereby sorting the listed Managed Objects. The property details of these Managed Objects can be accessed through the menu specific for the selected object. The Inventory panel operations are triggered on accessing the menus that are specific for the panel. Refer to the following procedures that describes the various operations in Integrated EMS Inventory.

- [Navigating inventory panel](#)
- [Searching EMS/NE from inventory panel](#)
- [Resynchronizing inventory for element managers](#)
- [Identifying problems of objects from inventory panel](#)
- [Dumping inventory details of Integrated EMS](#)
- [Creating a custom view for the inventory panel](#)
 - [Custom views for inventory: matching criteria](#)
 - [Example for creating custom view for inventory](#)

Navigating inventory panel

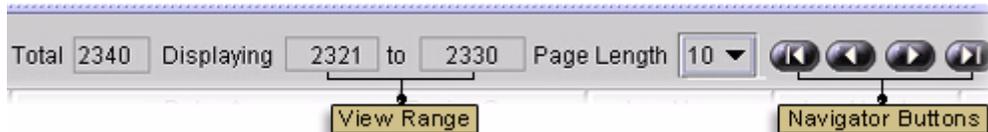
The inventory can be navigated with the help of navigation tools such as view range, navigator buttons and column reordering. You can navigate the inventory for an easy and understandable view or sort out the database based on your requirements. The various ways in which the Inventory can be navigated are listed below:

To locate the Navigation toolbar in Inventory, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Navigate to the **Inventory** panel in the Integrated EMS tree. You can find the Navigation toolbar in the top part of the Inventory panel in the right-hand side of Integrated EMS Client.

View Range: The range of rows that are displayed in the table. It is placed on top of the Inventory window. User can also use the default page lengths available in the list box.



Note: In the Inventory panel, the objects being viewed take precedence over the updates received (for example, when new managed objects are added into the database). This is unlike objects displayed in the Events or Alarms browser. In Events or Alarms browser, the latest objects added are displayed in the beginning of the browser followed by the already added objects (for example, updates get precedence over the objects being viewed). In the Inventory panel, the latest objects added are displayed at the end, wherein you need to scroll through to view the latest managed objects that were added.

Navigator Buttons: The Inventory panel contains four navigator buttons on the right top. They are First, Previous, Next, and Last. The

description of the buttons as according to the order they are displayed is as follows.

- **First button:** This button is used to view the first page of the internal frame, which displays data retrieved from the database.
- **Previous button:** This button is used to view the previously viewed page of the internal frame, which displays data retrieved from the database.
- **Next button:** This button is used to view the next page of the internal frame, which displays data retrieved from the database.
- **Last button:** This button is used to view the last page of the internal frame, which displays data retrieved from the database.

Sort: You can sort the data based on the column type and the details can be viewed either in ascending order or descending order. For details, refer to "Understanding sorting of data" of *Integrated EMS Basics*, NN10329-111.

Both server-side and client-side sorting can be done for one column as required. These sorting are also indicated by the combination of the above indicators.

Column reordering: For an easy view of the data, you can reorder the columns by just dragging the column header and moving it to the required place in the table.

Search: One can find the required device of a particular criteria or on a general condition. Search dialog can be launched from the Edit menu or through the Find option in the toolbar or by pressing Ctrl+F. For more details refer to searching devices.

Searching EMS/NE from inventory panel

This function enables you to search one or more related events from the inventory. The search operation is performed on the entire database. You can find the required network using a particular criteria or a general condition. To invoke the Search dialog, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Select the **Inventory** panel in the Integrated EMS tree.
- 3** Launch the Search dialog using the **Edit-->Search** menu command.

The search is made on the server side, which means that the search is done on the entire database and is not restricted to the displayed page alone. More flexibility has been provided in the search feature so that you can search on a particular property or on a general condition.

The Search dialog can be launched using the Edit-->Search menu command or using the find button in the toolbar, or by pressing Ctrl+F keys.

You have an option to select whether all the criteria or any of the criteria given has to be satisfied. This option can be set by selecting the Match any of the following option or Match all of the following option.

The search can be on one or more criteria using the "More" and "Fewer" buttons. You can add any criterion on which you have to go for search. The first option in the screen pop up is a list box, it lists the existing column headers in the Inventory table of the Inventory panel. The second option has two different sets of search criteria a normal set of criteria, and a date/time criteria:

The normal set of criteria consists of:

- starts with
- doesn't start with
- ends with
- doesn't end with
- contains
- doesn't contain

- equals
- not equals

The Date/Time criteria consists of:

- is before
- is after
- equals
- not equals

The third option is a data field or Date/Time component for entering your specific argument. By default, the Date/Time component shows the current date and time in the order of month, date, year, hour, minute, second, and AM/PM, which can be chosen by using the up and down arrows. The following figure shows the search window search for a specific object:

Search

Search for Managed objects

Match any of the following Match all of the following

Search Criteria

Name starts with raghuram

Type starts with EMS-APS

More Fewer

Search Close

Java Web Start Window

Resynchronizing inventory for element managers

Managed Objects (MOs) are added to the Integrated EMS topology either by explicitly adding them through the "Add EMS/NE" wizards or they can be auto discovered. For example, when provisioning an Element Manager in Integrated EMS the associated Element Manager will be added to "Element Managers" node in the topology tree. In addition, Integrated EMS will discover the sub-tending devices managed by the Element Manager and propagate these discovered devices into "Network Elements" branch in the topology tree. Auto discovery is performed when provisioning the following element managers to the Integrated EMS topology.

- APS Manager
- GWC Manager
- MG 9000 Manager
- Multi-Service Data Manager
- SAM21 Manager
- UAS Manager

After Integrated EMS Server is started, some of the managed element managers intimate the dynamic change of their properties to Integrated EMS in order to update the Inventory. The above element managers do not have this capability to intimate dynamic change of properties, such element managers need to manually resynchronize to update Integrated EMS Inventory. The element managers details can be resynchronized using one of the following GUIs:

- Topology
- Inventory

Resynchronizing Inventory for Element Managers topology GUI

To resynchronize the Inventory details for an Element Manager in the corresponding topology GUI, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2** Navigate to the **Element Managers** topology panel under the **Integrated EMS Topologies node** in the Integrated EMS tree.

- 3 Select the required Element Manager map symbol in the selected topology node for which resynchronizing inventory details is required.
- 4 Right-click the map symbol and select the **Resynchronize Inventory** menu item from the popup menu to resynchronize the Inventory
OR
Select the **<Object-specific menu>-->Resynchronize Inventory**, where the **<Object-specific menu>** menu indicates the dynamic menu for the selected EMS/NE in the topology.

Note: The element manager objects (listed above) that have inventory details in Integrated EMS database in sync with the corresponding element manager properties cannot be resynchronized. Hence those element manager map symbols do not have the **Resynchronize Inventory** menu item in the popup menu (launched from map symbol) or **<Object-specific menu>**.

Resynchronizing Inventory in Inventory GUI

To resynchronize the inventory details for an Element Manager in Inventory GUI, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Navigate to the **Inventory** panel in the Integrated EMS tree.
- 3 Select a row of required NE in the Inventory table for which resynchronizing alarms is required.
- 4 Right-click any part of the row and select the **Resynchronize Inventory** menu item to resynchronize the Inventory.
OR
Select the **<Object-specific menu>-->Resynchronize Inventory**, where **<Object-specific menu>** menu indicates the dynamic menu for the selected EMS/NE row in Inventory table.

Note: The Element Manager objects (listed above) inventory details in Integrated EMS database in sync with the corresponding element manager properties cannot be resynchronized. Hence those rows in Inventory table does not have the **Resynchronize Inventory** menu item in the popup menu (launched from map symbol) or **<Object-specific menu>**.

Identifying problems of objects from inventory panel

In the domain of Network Management Systems, it is imperative that the Manager (Integrated EMS) is informed about the state of every network element (NE). The Manager receives network notifications about the state of every managed NE. These notifications are unsolicited messages sent by either the agent in the NE or through status polling techniques adopted by the Manager. These malfunctions or faults are acknowledged by Integrated EMS as generated events and alarms. You can view the generated events and alarms for a device selected from the displayed list of the Inventory panel. This can be accomplished by accessing the panel-specific menu View. On clicking the required menu item, that is, events or alarms of the panel-specific menu, the corresponding panel gets displayed in the Client with the display of the generated events or alarms of the selected device.

To navigate to Inventory node, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Navigate to the **Inventory** panel in the Integrated EMS tree.

Note: You can only access alarms or events for the following types of objects:

- element managers
- NEs
- EMS platforms

Accessing Alarms for selected EMS/NE

You can view the alarms generated for the EMS/NE selected in the list view of the Inventory panel by accessing the panel-specific menu option View-->Alarms. On choosing this menu option, the Alarms panel (under the **Fault Management** node) of Integrated EMS Tree gets selected, displaying the last generated alarm and its severity status for the selected device.

The alarms associated with the managed object can be view from the topology node by selecting the managed object in the topology and select View-->Alarms menu command.

Note: All the events from the CS 2000 Core Manager are added as stateless events in Integrated EMS. These events are not correlated to alarms.

Accessing Events

: You can view the events generated for the device selected in the list view of the Inventory panel, by accessing the panel-specific menu option View-->Events. On choosing this menu option, the Network Events panel (under the **Fault Management** node) of Integrated EMS Tree gets selected, displaying the list of generated events over a period of time for the selected device.

The events associated with the managed object can be view from the topology node by selecting the managed object in the topology and select View-->Events menu command.

Updating the Status

: Whenever the status of a selected object is to be updated, the Object-specific menu Update Status menu item can be used from the corresponding map symbol. This menu item enables the user to view the latest status of the selected device, instantaneously. This means, irrespective of the configured polling period, Integrated EMS fetches for the current status of the selected device. For example, if you have to retrieve the status of a particular selected node of the displayed list of the Inventory panel, select the menu command Node-->Update Status.

Dumping inventory details of Integrated EMS

The inventory details of Integrated EMS can be dumped to a text file from various GUIs in Integrated EMS Web Start Client. This section describe the following:

- [Dumping inventory details from Integrated EMS object](#)
- [Dumping inventory details from Inventory GUI](#)
- [Dumping inventory details from topology GUI](#)
- [Understanding dumped inventory details](#)

Dumping inventory details from Integrated EMS object

To dump the inventory details from Integrated EMS object, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select Integrated EMS map symbol in the **Element Managers** topology panel in the Integrated EMS tree.
- 3 Right-click Integrated EMS map symbol and select the **Dump Inventory Details** menu item from the popup menu.

OR

Select the **IEMS Mgr-->Dump Inventory Details** menu command.

A dialog is launched and displays the message that is dumped in the file inventoryData.txt present under /opt/nortel/iems/current/logs.

Dumping inventory details from Inventory GUI

To dump the inventory details from Inventory GUI, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Inventory** panel in the Integrated EMS tree.

- 3 Select the **Tools-->Dump Inventory Details** menu command.
A dialog is launched and displays the message that is dumped in the file inventoryData.txt present under /opt/nortel/iems/current/logs.

Dumping inventory details from topology GUI

To dump the inventory details from topology GUI, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select a topology panel in the Integrated EMS tree.
- 3 Select the **Tools-->Dump Inventory Details** menu command.
A dialog is launched and displays the message that is dumped in the file inventoryData.txt present under /opt/nortel/iems/current/logs.

Understanding dumped inventory details

The inventory details are dumped in a text file as mentioned in the table below. This section describes how the information is stored in this file and details of various properties. These details are helpful to parse the information stored in the text file.

File Details

The details of the file in which the inventory details are dumped is listed in the table below.

Field	Value
File name	inventoryDetails.txt
File location	/opt/nortel/iems/current/logs
Field delimiters	Comma (separated by ",")
Record separator	Next line (Enter)

Field	Value
End of file marker	-1 (when read byte-by-byte as in Sun Java terminology)
Maximum file size	No limit

Details of properties

The details of properties are displayed in the table below.

Field	Data type in database	Column Size	Description	Possible values
Name	Varchar2	100	A unique name for the map symbol	Not Applicable
ParentName	Varchar2	100	The host name of the parent if present. This field is filled only for sub-units, NEs or EMS applications objects which are discovered automatically with corresponding platforms or element managers. Example succession-sol1-SSP FS-Unit-0 is sub-unit of succession-sol1-SSP FS platform object.	null or parent name
IPAddress	Varchar2	100	The IP address of the object	Not Applicable
Type	Varchar2	100	The type of object	Name of EMS application, element manager, platform or NE.
Version	Varchar2	25	The version of the object.	6.2 or 7.0.

Field	Data type in database	Column Size	Description	Possible values
Status	Number	22	The status of the object.	Unknown, Clear, Critical, Major, Minor, or Warning
Managed	Varchar2	10	Indicates whether the object is managed or unmanaged.	true or false
InterfaceDetails	Varchar2	200	Displays the location of files with file names in which the interface details are stored. The interface name and each file location are separated by ":"(colon)	null or location of interface details
			Example SYSLOG:/var/log/customerlog:/var/log/securitylog:/var/log/auditlog	

Note: The data type for the property Status is "Number" since the status of object is stored in numeric format. For example, an object with status "Critical" is stored with the value "1" in Status column.

A sample text from the inventoryDetails.txt file is given below. The commas together(,,) indicates the null value in the corresponding field.

```
Name, ParentName, IPAddress, Type, Version, Status, Managed, InterfaceDetails
```

```
umanand-USP, , 192.168.9.97, USP, 6.2, Unknown, true, SNMP:public:v1:161
```

```
succession-soll-SSPFS, , 192.168.4.176, SSPFS, 6.2, Clear, true, SYSLOG:/var/log/customerlog:/var/log/securitylog:/var/log/auditlog
```

```
succession-soll-SSPFS-Unit-0, succession-soll-SSPFS, 192.168.4.176, SSPFS, 6.2, Clear, true, SYSLOG:/var/log/customerlog:/var/log/securitylog:/var/log/auditlog
```

```
succession-soll-SSPFS-Unit-0,succession-soll-SSPFS,  
192.168.4.176,SSPFS,6.2,Clear,true,SYSLOG:/var/log/  
customerlog:/var/log/securitylog:/var/log/auditlog
```

```
raghuras-LMM,,192.168.9.105,LMM,6.2,Clear,true,,
```

```
kashok-PP8600,,192.168.1.98,PP8600,7.0,Clear,true,S  
NMP:public:v1:161
```

```
mvivekanandan-STORM,,192.168.9.97,STORM,6.2,Clear,t  
rue,SNMP:public:v2c:161
```

```
saranganj-NPM,,192.168.9.243,NPM,6.2,Clear,true,SYS  
LOG:/var/log/customerlog:/var/log/securitylog:/var/  
log/auditlog
```

Creating a custom view for the inventory panel

By creating custom views, you can easily find or filter out the required output in the screen by sorting through large amount of data from the Integrated EMS. A custom view is basically a set of objects or data, which are subsets of a complete set of data or objects, satisfying a given criteria.

Using Features in custom view

The various features in custom view are listed below

- The inventory of a specific criteria can be viewed.
- The updates of data are Dynamic.
- Same custom view name can be used at different levels.
- The column (properties to view) is customizable.
- You can change the column order, sort the data, and save the states of custom view.
- Custom view can be modified.
- Custom view can be renamed.

To perform various custom view operations for Inventory node, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).

- 2 Select the Inventory node in the Integrated EMS tree and proceed with the menu bar options in the following table to utilize the features listed above.

Features in custom views for Inventory

Menu Bar Option	Tool button in Toolbar	Shortcut	Description
Custom Views--> Add Custom View		Ctrl+N	To add a new custom view with specific criteria.
Custom Views--> Remove Custom View		Ctrl+R	To remove a custom view. The parent custom view (Inventory) cannot be removed.
Custom Views--> Modify Custom View		Ctrl+M	To modify any custom view.
Custom Views--> Save Custom View		Ctrl+S	To save the current state of the custom view, such as column order, sort order, and others.
Custom Views--> Rename Custom View		Alt+F2	To rename any custom view

Add or Modify custom a view

This option adds a new custom view with the given criteria. When this option of adding a new custom view is chosen, a custom view property window is displayed. After the form is filled with the necessary criteria and submitted, the new custom view is created and you can see the difference in the tree on the left.

When the modify custom view option is selected, the custom view property window is displayed. After the necessary changes are done and submitted, the existing custom view is updated.

Remove custom view

This option removes the currently selected custom view. If a custom view has one or more custom views (as child view), the complete set (parent and child) are removed. The main parent custom view (default

- Inventory) cannot be removed. Selecting the Remove Custom View option asks for a confirmation.

Save custom view

This option saves the current state of the custom view such as order of the column, the sort order, and the displayed data.

Rename custom view

This option helps you rename the current custom view as required. While renaming the custom view name, if you wish to have the same old name, then the user must press Esc key before completing it.

Custom views for inventory: matching criteria

By creating custom views, you can find out the required output on the screen, from a large collection of data of Integrated EMS. You can set the match criteria by using the Object Properties form, which is retrieved by accessing the Custom Views (panel-specific menu) -->Add Custom Views menu command. The properties form can contain details such as filter view name, parent name, class name, IP address, and other properties.

To select the Inventory node, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select to the Inventory node in the Integrated EMS tree.

Matching criteria

This sub-section describes how the match criteria can be set using the Object Properties form. The Object Properties window is launched using the Custom Views-->Add Custom Views menu command.

Nortel Show objects with these Properties [X]

Object Properties

Properties Tree Node Properties

Filter View Name:

ParentName:

name:

type:

status:

statusChangeTime:

classname:

managed:

isSNMP:

ipAddress:

netmask:

pollInterval:

statusUpdateTime:

tester:

uClass:

<<Previous Next>>

Apply Filter Close Help

Java Web Start Window

Refer to the following table for the properties in the property sheet, for filling in the fields, and for other information.

Field	Description
Filter View Name	Specify name for the particular custom view.
ParentName	In the drop-down list, select the object in the tree list box under which this custom view is to be added. The default is Inventory node.
Name	Specify the unique name of the EMS/NE.
ipAddress	Specify the unique address assigned to each device. Note: Do not specify the IP address in the client GUI or the command prompt UI, with an octet which is prefixed with a "zero". An IP address whose octet ranges from 0 to 255, when prefixed with zero, such as 010, is interpreted as an octal number and is passed as an "8", which results in an invalid IP address.
Managed	Specify whether the devices are managed. True: Includes all managed devices. False: Excludes all managed devices. All: Includes all devices.
Type	Specify the type of EMS/NE, such as network, map symbol, or an interface.
isSNMP	This field must not be used.
Classname	Specify the class name of the managed device. For example, the class name for a node object (map symbol) is the value "Node".
Netmask	Specify the net mask assigned to the managed device.
PollInterval	Specify the poll interval (the time gap between two successive status polling of a managed device).
Status	Specify the status (severity) of the device in the inventory that indicates the criticality. The severity of the device to be filtered can be assigned here.

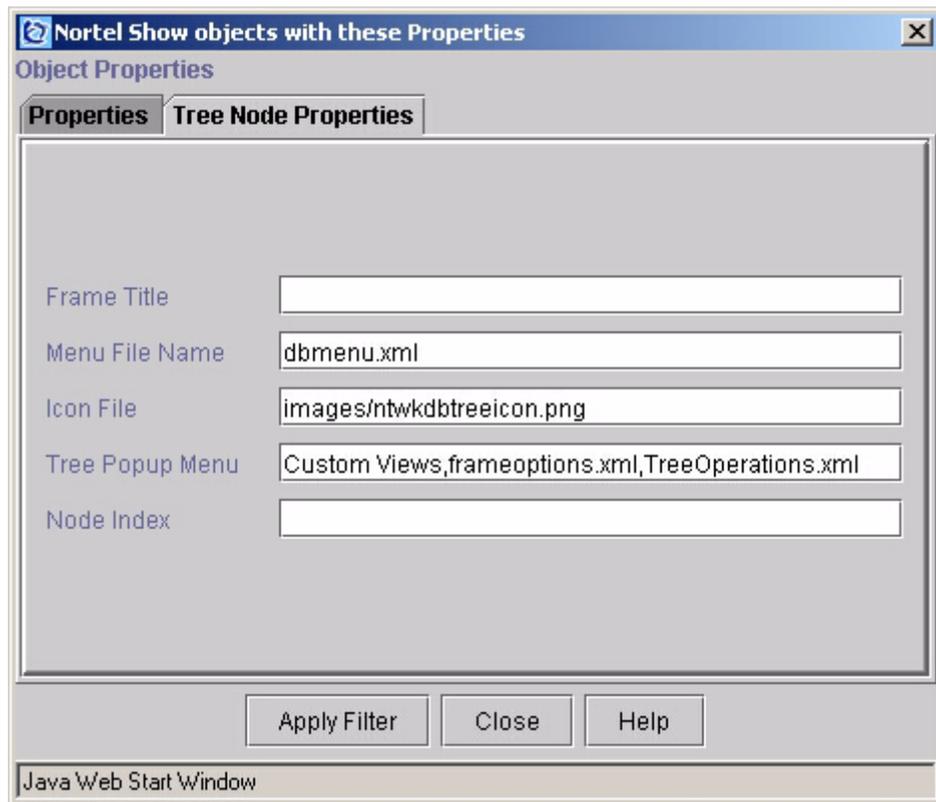
Field	Description
StatusChangeTime	Specify the time at which the status of the device changed. The time is represented as the number of milliseconds.
Tester	Specify the class used for the status polling of the selected managed devices.
Uclass	Specify the class to be launched for status polling. Use this field only if the value in the Tested field is "usertest".

Note: If all the parameters (except filter view name) are left blank, then the default value "all" is assigned.

Tree node properties

Besides the Object Properties, you can specify other properties such as Tree Node properties. This is achieved in the Tree Node Properties tab of the GUI. The Tree Node properties can include properties such as Frame Title, Menu File Name, Icon File, and others.

The Tree Node Properties tab is as in the following figure.



The description of the fields in the Tree Node Properties tab is listed in the following table:

Description of fields in Tree Node Properties tab of Custom View GUI for Inventory

Field	Description
Frame Title	Specify the name to be displayed on the title bar of the custom view's internal frame.
Menu File Name	The panel-specific menu file name for the Inventory panel. Do not modify this field.
Icon File	Indicate which icon you want to use for the custom view. This icon is visible in the tree as well as in the title bar of the internal frame. The image must be in PNG format. The icon file must be present under the <code>/opt/nortel/iems/current/</code> folder or any sub folder under the <code>/opt/nortel/iems/current/</code> folder. The <code>/opt/nortel/iems/current/</code> folder is the folder under which the Integrated EMS Server is installed.

Description of fields in Tree Node Properties tab of Custom View GUI for Inventory

Field	Description
Table Popup Menu	The file name of the menu used to display a contextual menu for the objects displayed in the table of the Inventory table. Do not modify this field.
Tree Popup Menu	The file name of the menu used to display a contextual menu for the Inventory node in the Integrated EMS tree. Do not modify this field.
Node	Specify the position of the custom view in relation to previously added views. If this field is left blank, the view is appended to the end of the current list of custom views.

Example for creating custom view for inventory

You can create custom views for viewing the inventory details for the given criteria. In the Matching Criteria section, you can find the various properties with which you can filter events. This procedure describes how to create custom view to view the inventory details of all the CS 2000 Manager with "Critical" status.

Creating custom view for inventory details of CS 2000 Core Manager

To create custom view for Inventory details of CS 2000 Core Manager, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Java Web Start Client (refer to "Launching Integrated EMS Java Web Start Client" of the *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Inventory** node in the Integrated EMS tree.
- 3 Right-click the Inventory node and select **Custom Views-->Add Custom Views** menu item.

The Object Properties form is displayed.

- 4 Enter the value "CS2K Devices" in **Filter Value Name** field.
- 5 Enter the value "EMS-CS2K-Mgr" in **Type** field, since the device with type "CS2K" is filtered and displayed in custom view.
- 6 Select the "Critical" value from the **Status** editable list box.

A GUI similar to the following screen shot is displayed.

Nortel Show objects with these Properties

Object Properties

Properties Tree Node Properties

Filter View Name CS2K Devices

ParentName Inventory

name

type EMS-CS2K-Mgr

status Critical

statusChangeTime

classname

managed all

isSNMP all

ipAddress

netmask

pollInterval

statusUpdateTime

tester

uClass

<<Previous Next>>

Apply Filter Close Help

Java Web Start Window

- 7 Click the **Next** button to proceed to next screen of the wizard.
- 8 Click the **Select Props To View** button.
The Select Table Columns window is displayed.
- 9 Select the following text boxes with the text
 - Name
 - Type
 - Last Changed Time
 - Managed

- 10 Click the **OK** button to apply the changes and close the Nortel Select Table Columns window.
- 11 Click the **Apply Filter** button to create a custom view for events from CS 2000 devices.

Note: The match criteria for a custom view can be modified after they are created. This is achieved by right-clicking the custom view and select the Custom Views-->Modify Custom View. This invokes the Object Properties form. You can also remove a custom view by right-clicking the custom view and selecting the Custom Views-->Remove Custom View.

Working with topologies in Web Client

Topology user interface displays a set of related objects, symbols, and sub-nodes that provide a graphical and hierarchical representation of element managers, network elements, EMS applications, and platforms. The topology nodes of Web Client provides the user interface, a view of the networks and systems using Web Client. The topology is displayed on the right-side frame. The left-side frame contains the tree view to navigate between different topology views. This section describes on how to add the various objects such as element managers, network elements, EMS applications and platforms. In addition, this section provides procedures on how to see the map details, manage or unmanage and perform other operations. Refer to the following sections for details:

- [Adding objects to topology in Web Client](#)
 - [Adding platforms using Web Client](#)
 - [Adding element managers in Web Client](#)
 - [Adding EMS applications in Web Client](#)
 - [Adding network elements in Web Client](#)
- [Editing and viewing object properties using Web Client](#)
- [Using other operations in topology of Web Client](#)

Adding objects to topology in Web Client

This section describes the procedures how to add the objects to the Integrated EMS topology using Web Client. A map symbol is associated with a managed object representing its status. When you add an object to the Integrated EMS topology, the corresponding map symbol is added to the associated topology. This section explains the procedure describes how to add various objects in the following sub-sections:

- [Adding platforms using Web Client](#)
- [Adding element managers in Web Client](#)
- [Adding EMS applications in Web Client](#)
- [Adding network elements in Web Client](#)

Note: Do not specify the IP address in the client GUI or the command prompt UI, with an octet which is prefixed with a "zero". An IP address whose octet ranges from 0 to 255, when prefixed with zero, such as 010, is interpreted as an octal number and is passed as an "8", which results in an invalid IP address.

Adding platforms using Web Client

This section provides the procedures how to add SSPFS and MDM platforms to the Integrated EMS topology using Web Client. For detailed explanation, follow these procedures:

- [Adding an SSPFS platform](#)
- [Adding an MDM platform](#)

Note: The SDM platforms are automatically discovered by Integrated EMS and added to the topology. The discovered SDM platform map symbols can be viewed under the **EMS Platforms** topology node in the Module tree of Web Client.

Adding an SSPFS platform

This procedure describes how to add the SSPFS platform to the topology using Web Client.

To add the SSPFS platform to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add Platform** node under the **Network Admin** tree. This invokes the Add Platform page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add Platform page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the platform.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "SSPFS" from the **Device Type** list box.
- 6 Select the mode from the **Mode** list box. If "Simplex" item is selected from Mode list box, follow [step a](#) and proceed to [step 7](#). If "Duplex" item is selected from the Mode list box, follow these steps:
 - a Enter the IP address of the active unit in the **Unit-0 IP Address** field.
 - b Enter the IP address of the inactive unit in the **Unit-1 IP Address** field.
- 7 Select the version of the device from the **Device Version** list box.

If selected device version is	Do
6.2	Got steps step 17

	If selected device version is	Do
	7.0	Go to step 8
	8.0	Go to step 8

8 Check the **Radius Secret** field to enable the RADIUS secret password and enter RADIUS secret password in the **Radius Secret** field.

Note: If the **Radius Secret** field is checked and the password is not entered, the wizard displays "Enter the radius secret" error.

9 Select the **Fault Interface** from the vertical button.

10 Enter the port value "2222" (in which the SSPFS communicates with Integrated EMS) in the **Port** field.

11 Enter the community in the **Community** field.

12 Select the SNMP version "v2c" from the **Version** list box.

13 Click the **Performance Interface** from the vertical tab.

14 Enter the port value "1161" in the **Port** field.

15 Enter the community in the **Community** field.

16 Select the SNMP version "v1" from the **Version** list box.

17 Click the **Add Platform** button to add the SSPFS platform.

*Once the SSPFS platform is added, "Successfully added to the database" message is displayed. The SSPFS platform with the specified name is added as a map symbol to the **EMS Platforms** topology. It is also added to the **SSPFS** topology under the **EMS Platforms** topology node in the Module tree.*

Note: Integrated EMS correlates events received only from the SSPFS SNMP interface. The non-SNMP interfaces such as SYSLOG must be disabled using the "disable local logging" option from CLI. For details, refer to "Disabling local logging of SSPFS platform faults" section of *ATM/IP Solution-level Fault Management*, NN10408-900.

Adding an MDM platform

The MDM platform is the runtime environment for various Nortel Networks EMSs and applications. Integrated EMS adds the MDM platform 8.0 automatically when adding the MDM 8.0 to the Integrated EMS topology. This procedure describes how to add the MDM platform version 6.2 or 7.0 to the topology in the Web Client.

To add the MDM platform to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add Platform** node under the **Network Admin** tree to invoke the Add Platform page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add Platform page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the platform.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "MDM" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Click the **Add Platform** button to add the MDM platform.
*Once the MDM platform is added, "Successfully added to the database" message is displayed. The MDM platform with the specified name is added as a map symbol to the **EMS Platforms** topology. It is also added to the **MDM** topology under the **EMS Platforms** topology node in the Module tree of Web Client.*

Adding element managers in Web Client

Integrated EMS provides an integration point for the various element managers. It allows a centralized point to launch the various element managers and the ability to view the faults from these systems in a common graphical interface. This section describes the procedure on how to add an Element Manager to the Integrated EMS topology using Web Client. The following sections explain the procedure describes how to add the element manager objects in the Integrated EMS topology:

- [Adding an APS Manager](#)
- [Adding an CS 2000 Core Manager](#)
- [Adding an CEM](#)
- [Adding an MCS Manager](#)
- [Adding an GWC Manager](#)
- [Adding an MG 9000 Manager](#)
- [Adding an MDM](#)
- [Adding an SAM21 Manager](#)
- [Adding an UAS Manager](#)
- [Adding an CICM Manager](#)

Note 1: When the above Element Manager Systems are added to the Integrated EMS topology, the network elements managed by these element managers are discovered automatically and added to the Integrated EMS topology.

Note 2: Integrated EMS supports dynamic updates for some of the element managers. Integrated EMS topology is updated based on the objects managed by the corresponding element managers. Integrated EMS supports dynamic topology updates for the following element managers:

- Audio Provisioning Server Manager
- Universal Audio Server Manager
- GWC Manager

Adding an APS Manager

This procedure describes how to add the Audio Provisioning Server Manager to the Integrated EMS topology using Web Client.

To add the APS Manager to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields in the Add EMS/NE page. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "EMS" from the **Type** list box.
- 6 Select "APS Mgr" from the **Device Type** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Select the version of the device from the **Device Version** list box.
- 9 Click the **Add EMS/NE** button to add the APS Manager.

*Once the APS Manager is added, "Successfully added to the database" message is displayed. The APS Manager with the specified name is added as a map symbol to the **Element Managers** topology. In addition, a topology node named APS Manager with the specified display name in brackets is added*

*under the **Element Managers** topology node in the Integrated EMS tree.*

Adding an CS 2000 Core Manager

This procedure describes how to add CS 2000 Manager in Integrated EMS topology using Web Client.

Note 1: While configuring the CS 2000 Core Manager logroute, ensure the following:

- Logroute on the associated SDM must be configured for TCPIN.
- Logroute on the associated SDM must be configured with ECORE set to OFF.
- Logroute on a CS 2000 Core Manager with a pre SDM20 software load version: the associated SDM log format must be set to STD or SCC2.
- Logroute on a CS 2000 Core Manager with a SDM20 or greater software load version: the associated SDM log format must be set to STD_OLD or SCC2_OLD.

Note 2: The end of log format for the NTSTD and SCC2 feeds can be configured in Integrated EMS by modifying the MLDefaultParams.xml file under the /opt/nortel/iems/current/conf folder. The SCC2 end of log format is specified in "SCC2_MESSAGE ENDOFLOG" parameter and NTSTD end of log format is specified in "NTSTD_MESSAGE ENDOFLOG" parameter. The end of log format must be using the X character format and be separated with colon (":"). The default end of log format values in MLDefaultParams.xml file are:

```
SCC2_MESSAGE ENDOFLOG="0A:0D:20:0A:0D"
```

```
NTSTD_MESSAGE ENDOFLOG="0A:19:0A:0D"
```

If the end of log format is changed in the MLDefaultParams.conf, the Integrated EMS Server requires restart to reflect the changes.

Note 3: Integrated EMS polls periodically to check the CS 2000 platform object status. If the data is not received between two status polls, Integrated EMS disconnects and reconnects the CS 2000 Core Manager. If the reconnect attempt throws an error, the CS 2000 Core Manager and its corresponding components turn to an unknown object status in Integrated EMS. In other words, the map symbols of these objects will turn to a gray background. For details on color for various severity levels, refer to the table in the [Updating status of objects manually](#).

It is suggested that the polling interval for the CS 2000 Core Manager object in Integrated EMS retain (or be left near) the default value (300 seconds). Reducing this significantly can result in frequent and

unnecessary attempts to reconnect to the CS 2000 Core Manager fault feed.

Note 4: All the events from the CS 2000 Core Manager are added as stateless events in Integrated EMS. These events are not correlated to alarms.

Note 5: The CS 2000 Core Manager residing on SSPFS platform is known as Core Billing Manager.

To add the CS 2000 Manager to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "EMS" from the **Type** list box.
- 6 Select "CS2K Core Mgr" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Select the associated platform from the **Platform** list box or retain the default value "SDM" if it belongs to SDM platform.

Note: When the CS 2000 Core Manager version 7.0 is added with associated platform as "SSPFS", it implied that CS 2000 Core Manager is a Core Billing Manager(CBM).
- 9 Select the NE type "CS 2000 Core" or "Call Agent Core" from the **Managing NE** Type list box. By default, "CS 2000 Core" is selected in the list box. If you select "Call Agent Core" from the

- Managing NE** Type list box, select the mode from the **Mode** list box and enter the valid IP address in the **Active Unit IP** field
- 10 Select the **Fault Interface** from the vertical tab.
 - 11 Select the log format "SCC2" or "NTSTD" from the **Log Format** list box.
 - 12 Enter the port in the **Port** field.

Note: The CS 2000 Core Manager sends log messages either through the NTSTD interface or through the SCC2 interface. Select the applicable interface fields and enter the port (if different from default value).
 - 13 Click the **Add EMS/NE** button to add the CS 2000 Core Manager.

*Once the CS 2000 Core Manager is added, "Successfully added to the database" message is displayed. The CS 2000 Core Manager with the specified name is added as a map symbol to the **Element Managers** topology. In addition, a topology node named **CS 2000 Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.*

Adding an CEM

This procedure describes how to add the Core Element Manager 8.0 to the Integrated EMS topology using Web Client.

Note: The Core Element Manager is available with selected versions of Carrier VoIP platforms. Hence, Core Element Manager is available in selected sites of Carrier VoIP platforms.

To add the Core Element Manager to the topology using Integrated Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 5 Select "EMS" from the **Type** list box.
- 6 Select "CEM Mgr" from the **Device Type** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Click the **Add EMS/NE** button to add the Core Element Manager.

*Once the Core Element Manager is added, "Successfully added to the database" message is displayed. The Core Element Manager with the specified name is added as a map symbol to the **Element Managers** topology.*

Adding an MCS Manager

This procedure describes how to add the MCS Manager to the Integrated EMS topology using Web Client.

Note 1: When adding MCS Manager of SSPFS HA configuration in Integrated EMS, both the active and inactive MCS Manager must be added as separate objects in Integrated EMS topology. The physical IP address of active or inactive MCS Manager host must be entered in the **Host Name/IP Address** of Add EMS/NE wizard. If the events are received from MCS Manager with virtual IP address, the events received from corresponding MCS Manager are correlated as events from unknown device.

Note 2: In the HA configuration, the standby MCS Manager is always in an "unknown" state and it raises the unable to communicate with device alarm. This alarm cannot be cleared in Integrated EMS.

Note 3: The MCS system manager (MCS SM) is also known as MCS Manager.

Required prerequisites for Integrated EMS to receive MCS fault and performance data

MCS must be configured to send fault and performance data to Integrated EMS; without this configuration, Integrated EMS receives no fault and performance data from Session Server NEs.

Required Prerequisites for launching MCS Client

MCS client launch is available only on a PC that has MCS software installed. For details of how to install the software refer to *MCS System Management Console User Guide*, NN10247-111. MCS Client software can be launched only in Microsoft Windows platforms.

Adding an MCS Manager using Web Client

To add the MCS Manager to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.

- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table.

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	Enter the host name or IP address of the element manager in this field.
Time Zone	Select the time zone from the Time Zone list box associated with the host name or IP address provided.

- 5 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 6 Select "EMS" from the **Type** list box.
- 7 Select "MCS 5200 Mgr" from the **Device Type** list box.
- 8 Select the version of the device from the **Device Version** list box.

If the selected version is	Do
6.2	steps 11 to 16 and step 23
7.0	steps 11 to 23
8.0	steps 9 to 23

- 9 Enter the user name of the device in the **User Name** field.
- 10 Select the mode of the device from the **Mode** list box.
If "Duplex" mode is selected, enter the primary IP address and secondary IP address in the **Instance 0** and **Instance 1** fields respectively.
- 11 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 12 Select the NE type "MCS/CSE MX" or "Media Proxy" from the **Managing NE Type** list box. By default, "MCS/CSE MX" is selected in the list box.
- 13 Select the **Fault Interface** from the vertical tab.
- 14 In the **Port** field, enter the port value (in which the EMS communicates with Integrated EMS).

- 15 Enter the community in the **Community** field.
- 16 Select the SNMP version "v2c" from the **Version** list box.
Note: The port value and SNMP version are dependent on the MCS Manager configuration that is added.
- 17 Select the **Performance Interface** from the vertical tab.
- 18 Enter the directory name where the CSV file (is present in the device) in the **Directory Name** field.
- 19 Enter the file mask of the CSV file (present in the device) in the **File Name** field.
Wildcard support is available for this field.
Example
If the file names starts with "CSVOM" string, user can enter the value "CSVOM*.closed".
- 20 Retain the "SFTP" mode of file transfer selected in the **Mode** list box.
Note: In the Mode list box, the SFTP mode of file transfer must be selected.
- 21 Enter the user name for FTP account in the **User ID** field.
- 22 Enter the corresponding password for FTP account in the **Password** field.
- 23 Click the **Add EMS/NE** button to add the MCS Manager.
*Once the MCS Manager is added, the "Successfully added to the database" message is displayed in the status bar. The MCS Manager with the specified name is added as a map symbol to the **Element Managers** topology.*

Adding an FPM

This procedure describes how to add the FPM to the Integrated EMS topology using Web Client.

Prerequisites for adding FPM

To add an FPM, the corresponding MCS must be added to the Integrated EMS topology.

Adding an FPM using Web Client

To add the FPM to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table.

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	Enter the host name or IP address of the element manager in this field.
Time Zone	Select the time zone from the Time Zone list box associated with the host name or IP address provided.

- 4 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 5 Select "EMS" from the **Type** list box.
- 6 Select "MCS 5200 Mgr" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Retain the version "8.0" in the **Device Version** list box.
- 9 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.

- 10 Select the MCS Manager to which the FPM corresponds to from the **MCS Managers** list box.
- 11 Enter the user name of the device in the **User Name** field.
- 12 Select the mode in the **Mode** list box.

If mode is	Do
Simplex	go to step 14
Duplex	go to step 13

- 13 Enter the secondary IP address in the **Secondary** field.
 - 14 Enter the primary IP address in the **Primary** field.
 - 15 Select the **Fault Interface** from the vertical tab.
 - 16 Enter the port value "9961" (in which the EMS communicates with Integrated EMS) in the **Port** field.
 - 17 Enter the community in the **Community** field.
 - 18 Select the SNMP version "v2c" from the **Version** list box.
- Note:** The port value and SNMP version are dependent on the MCS Manager configuration which is added.
- 19 Select the **Performance Interface** from the vertical tab.
 - 20 Enter the directory name where the CSV file (is present in the device) in the **Directory Name** field.
 - 21 Enter the file mask of the CSV file (present in the device) in the **File Name** field.

Wildcard support is available for this field.

Example

If the file names starts with "CSVOM" string, user can enter the value "CSVOM*.closed".

- 22 Retain the "SFTP" mode of file transfer selected in the **Mode** list box.
- Note:** In the Mode list box, the SFTP mode of file transfer must be selected.
- 23 Enter the user name for FTP account in the **User ID** field.
 - 24 Enter the corresponding password for FTP account in the **Password** field.
 - 25 Click the **Add EMS/NE** button to add the FPM.

Once the FPM is added, the "Successfully added to the database" message is displayed in the status bar. The details on

how the map symbol and FPM node is added under Element Managers node, refer to [Adding a Fault and Performance Manager \(FPM\)](#).

Adding an GWC Manager

Gateway Controller Manager manages Gateway Controller NEs. This procedure describes how to add the Gateway Controller (GWC) Manager to the Integrated EMS topology using Web Client.

To add the GWC Manager to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "EMS" from the **Type** list box.
- 6 Select "GWC Mgr" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform
- 9 Click the **Add EMS/NE** button to add the GWC Manager.

*Once the GWC Manager is added, "Successfully added to the database" message is displayed. The GWC Manager with the specified name is added as a map symbol to the **Element Managers** topology. In addition, a topology node named **GWC Manager** with the specified display name in brackets is added*

*under the **Element Managers** topology node in the Integrated EMS tree.*

Adding an MG 9000 Manager

MG9K is the abbreviation for Multi-Service Gateway 9000. MG 9000 Manager manages MG 9000 NEs. MG 9000 Manager is also known as MG9K Manager since 9K stands for 9000. This procedure describes how to add the MG 9000 Manager using Web Client.

To add the MG 9000 Manager to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "EMS" from the **Type** list box.
- 6 Select "MG9K Mgr" from the **Device Type** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Select the version of the device from the **Device Version** list box.

If the device version is	Do
6.2	follow step 9 to step 11 and step 15
7.0	follow step 9 to step 11 and step 15

	If the device version is	Do
	8.0	go to step 9

9 Enter the valid IP address in **MG9K Mid Tier IP** field. The IP address of the Mid Tier existing between Integrated EMS and MG 9000 Manager must be provided here.

10 Select the **Fault Interface** from the vertical tab.

11 Enter the valid subnet value with version in **Subnet (with version)** field as in following table:

Subnet Value for MG 9000 Manager in Various Version of Succession

MG 9000 Manager at Version	Subnet Value
SN06.2	Subnet_062
SN07	Subnet_7
SN08	Subnet_7

- 12** Select the **Performance Interface** from the vertical tab.
For device version 6.2 or 7.0, a "No Performance Interface" message is displayed.
- 13** Enter the user name for SFTP-PULL in the **User ID** field.
- 14** Enter the password in the **Password** field.
- 15** Click the **Add EMS/NE** button to add the MG 9000 Manager.
*Once the MG 9000 Manager is added, "Successfully added to the database" message is displayed. The MG 9000 Manager with the specified name is added as a map symbol to the **Element Managers** topology. In addition, a topology node named **MG 9000 Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.*

Adding an MDM

Multi-Service Data Manager manages Packet Voice Gateway 7480/15000 (PVG 7480/15000) and Multiservice Switch 15000 (MSS15K) NEs. This procedure describes how to add the Multi-Service Data Manager to the Integrated EMS topology using Web Client.

To add the Multi-Service Data Manager to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "EMS" from the **Type** list box.
- 6 Select "MDM" from the **Device Type** list box.
- 7 Select the version such as 8.0 of the device from the **Device Version** list box.
- 8 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.

- 9** Select the manager unit mode from the **Mode** list box. There are two modes to be selected based on whether the MDM application is to run in a simplex or duplex mode. In the simplex mode, the MDM application is configured in one machine while in the duplex mode the application is configured to run in two machines. In the duplex mode configuration, the Integrated EMS switches over to the alternate (or secondary) machine in which the MDM application is executing, when the current (or primary) machine is down.

If Mode is	Do
Simplex	follow step 11 to step 14 and proceed to step 17
Duplex	follow step 10 to step 20

- 10** Enter the secondary machine IP address in which the MDM application is to run, for the **Inactive Unit IP** field.
- Note:** Do not specify the IP address with an octet, which is prefixed with a "zero". An IP address whose octet ranges from 0 to 255, when prefixed with zero, such as 010, is interpreted as an octal number and is passed as an "8", which results in an invalid IP address.
- 11** Configure the user name and password under the **MDM Account Details** section for centralized account common to all MDM devices. Changing the user name or password for any MDM device is reflected for all MDM devices.
- Note:** The **MDM Account Details** section is displayed only for the first time an MDM device is added to the Integrated EMS.
- 12** Select the **Fault Interface** from the vertical tab.
- 13** In the **Port** field of the Primary panel, enter the port in which log messages are sent by the MDM element manager.
- 14** Enter the user identification in the **User ID** field of the Primary panel.
- 15** In the **Port** field of the Secondary panel, enter the port in which log messages are sent by MDM element manager.
- 16** Enter the user identification in the **User ID** field of the Secondary panel.

- 17 Select the **Performance Interface** from the vertical tab.

Note: For the correct operation of the OM feed between the MDM and the IEMS, a Performance Measurement Stream Processor (PMSP) server must already be configured on the MDM workstation, and the 5-minute and 30-minute TCP port values on the MDM's PMSP server must match the 5-minute and 30-minute port value configured on the IEMS for the MDM. For more information on the PMSP, refer to section "Performance Measurement Stream Processor (PMSP)" of *Nortel Networks Multiservice Data Manager Server Reference*, 241-6001-310.
- 18 Enter the port number in the **Five Min Collection Port** field. The port configured in this field is scheduled to collect data every five minutes from the NEs managed by the MDM application. The port number must match the 5-minute TCP port number configured for the MDM's PMSP server. The default port is 1646.
- 19 Enter the port in the **Thirty Min Collection Port** field. The port configured in this field is scheduled to collect data every thirty minutes from the NEs managed by the MDM application. The port number must match the 30-minute TCP port number configured for the MDM's PMSP server. The default port is 1647.
- 20 Click the **Add EMS/NE** button to add the Multi-Service Data Manager.

Note: After the Multi-Service Data Manager is added, provision the client-server IP address with the procedure explained in the "Launching Multi-Service Data Manager" of *Integrated EMS Basics*, NN10329-111.

*Once the MDM is added, "Successfully added to the database" message is displayed. The MDM with the specified name is added as a map symbol to the **Element Managers** topology. In addition, a topology node named **MDM** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.*

Adding an SAM21 Manager

SAM21 is the acronym for Services Application Module, 21 slot. SAM 21 Manager manages SAM21 NEs. This procedure describes how to add the SAM21 Manager to the Integrated EMS topology using Web Client.

To add the SAM21 Manager to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "EMS" from the **Type** list box.
- 6 Select "SAM21 Mgr" from the **Device Type** list box.
The various fields display the location of various log files such as Customer Log File, Audit Log File, and Security Log File.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 9 Click the **Add EMS/NE** button to add the SAM21 Manager.
*Once the SAM21 Manager is added, "Successfully added to the database" message is displayed. The SAM21 Manager with the specified name is added as a map symbol to the **Element***

***Managers** topology. In addition, a topology node named **SAM21 Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.*

Adding an UAS Manager

Universal Audio Server Manager manages Universal Audio Server NEs. This procedure describes how to add the Universal Audio Server Manager to the topology using Web Client.

To add the Universal Audio Server Manager to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "EMS" from the **Type** list box.
- 6 Select the "UAS Mgr" value from the **Device Type** list box.
The channel name and the administrator name are displayed in various fields.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 9 Click the **Add EMS/NE** button to add the Universal Audio Server Manager.

*Once the Universal Audio Server Manager is added, "Successfully added to the database" message is displayed. The UAS Manager with the specified name is added as a map symbol to the **Element Managers** topology. In addition, a topology node named **UAS Manager** with the specified display name in brackets is added under the **Element Managers** topology node in the Integrated EMS tree.*

Adding an CICM Manager

This procedure describes how to add the CICM Manager to the Integrated EMS topology using Web Client.

Note: The CICM Manager is available with selected versions of Carrier VoIP platforms. Hence, CICM Manager is available in selected sites of Carrier VoIP platforms.

Required prerequisites for Integrated EMS to receive CICM fault and performance data

CICM Manager must be configured to send fault data to Integrated EMS. The CICM has a script called **snmpri_configure** which is used to configure the CICM with Integrated EMS server virtual IP address and port for sending the fault data to Integrated EMS; without this configuration, Integrated EMS receives no faults from CICM.

Required prerequisites for launching CICM Manager

CICM Manager has to be configured using **SSPFS CLI** tool for launching CICM Manager from Integrated EMS Client. For details, refer to *ATM/IP Solution-level Configuration Management*, NN10409-500.

Adding an CICM Manager using Web Client

To add the CICM Manager to the topology using Integrated Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.

- 4 Enter the values for the Host Name/IP Address, Time Zone, and Display Name fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the element manager.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 5 Select "EMS" from the **Type** list box.
- 6 Select "CICM Mgr" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 9 Select the manager unit mode from the **Mode** list box. If "Duplex" mode selected, enter the inactive unit IP in the **Inactive Unit IP** field.
- 10 Enter the card location in the **Card Location** field.
- 11 Select the **Fault Interface** from the vertical tab.
- 12 Enter the port (in which the EMS communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 13 Enter the community in the **Community** field.
- 14 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:
- User name
 - Context name

If you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name
- Authentication Protocol

If you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name
- Authentication Protocol
- Privacy Password

15 Select the **Performance Interface** from the vertical tab.

16 Repeat [step 12](#) to [step 14](#).

17 Click the **Add EMS/NE** button to add the CICM Manager.

*Once the CICM Manager is added, "Successfully added to the database" message is displayed. The CICM Manager with the specified name is added as a map symbol to the **Element Managers** topology.*

Adding EMS applications in Web Client

EMS applications manage elements in a network. This section provides the procedure that describes how to add the following EMS applications to the Integrated EMS topology using Web Client:

- Line Maintenance Manager
- Trunk Maintenance Manager
- OSSGate
- Network Patch Manager
- QoS Collector application
- SBRM application

Adding an LMM application

Integrated EMS manages the Line Maintenance Manager (LMM) application after it is added to the Integrated EMS topology. This procedure describes how to add the LMM application to the Integrated EMS topology using Web Client.

To add the LMM application to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add Application** node under the **Network Admin** tree to invoke the Add Application page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "LMM" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Click the **Add Application** button to add the LMM application.

*Once the LMM application is added, "Successfully added to the database" message is displayed. The LMM application with the specified name is added as a map symbol to the **EMS Applications** topology. It is also added to the **LMM** topology under the **EMS Applications** topology node in the Integrated EMS tree.*

Adding an TMM application

Integrated EMS manages the Trunk Maintenance Manager application after it is added to the Integrated EMS topology. This procedure describes how to add the Trunk Maintenance Manager (TMM) application to the Integrated EMS topology using Web Client.

To add the TMM application to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add Application** node under the **Network Admin** tree to invoke the Add Application page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add Application page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "TMM" from the **Device Type** list box.
- 6 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 7 Click the **Add Application** button to add the TMM application.

*Once the TMM application is added, "Successfully added to the database" message is displayed. The TMM application with the specified name is added as a map symbol to the **EMS Applications** topology. It is also added to the **TMM** topology under the **EMS Applications** topology node in the Integrated EMS tree.*

Adding an OSSGate application

Integrated EMS manages OSSGate application after it is added to the Integrated EMS topology. This procedure describes how to add the OSSGate to the topology using Web Client.

To add the OSSGate application to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add Application** node under the **Network Admin** tree to invoke the Add Application page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "OSSGate" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Click the **Add Application** button to add the OSSGate application.

*Once the OSSGate application is added, "Successfully added to the database" message is displayed. The OSSGate application with the specified name is added as a map symbol to the **EMS Applications** topology. It is also added to the **OSSGate** topology under the **EMS Applications** topology node in the Integrated EMS tree.*

Adding an NPM application

Integrated EMS manages the Network Patch Manager application after it is added to the Integrated EMS topology. This procedure describes how to add Network Patch Manager (NPM) application to the Integrated EMS topology using Web Client.

To add the NPM application to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add Application** node under the **Network Admin** tree to invoke the Add Application page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields in the wizard. For details on these fields, refer to the following table:

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "NPM" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Click the **Add Application** button to add the NPM application.

*Once the NPM application is added, "Successfully added to the database" message is displayed. The NPM application with the specified name is added as a map symbol to the **EMS Applications** topology. It is also added to the **NPM** topology under the **EMS Applications** topology node in the Integrated EMS tree.*

Adding an QCA

Integrated EMS manages the QoS Collector application after it is added to the Integrated EMS topology. This procedure describes how to add the QoS Collector application to the Integrated EMS topology using Web Client.

To add the QoS Collector Application to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add Application** node under the **Network Admin** tree to invoke the Add Application page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields in the wizard. For details on these fields, refer to the following table:

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "QoS Collector" from the **Device Type** list box.
- 6 Select the version of the device from the **Device Version** list box.
- 7 Select the associated platform from the **Platform** list box or retain the default value "None" if it does not belong to any platform.
- 8 Click the **Add Application** button to add the QoS Collector application.

*Once the QoS Collector application is added, "Successfully added to the database" message is displayed. The QoS Collector application with the specified name is added as a map symbol to the **EMS Applications** topology. It is also added to the **QoS Collector** topology under the **EMS Applications** topology node in the Integrated EMS tree.*

Adding an SBRM application

Integrated EMS manages the SBRM application after it is added to the Integrated EMS topology. This procedure describes how to add the SBRM application to the Integrated EMS topology using Web Client.

To add the SBRM Application to the topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Click the **Admin** tab in the Web Client.
- 3 Select the **Add Application** node under the **Network Admin** tree to invoke the Add Application page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields in the wizard. For details on these fields, refer to the following table:

Field	Description
Host Name/IP Address	The field for the host name or IP address of the application.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "SBRM" from the **Device Type** list box.
- 6 Click the **Add Application** button to add the SBRM application.
*Once the SBRM application is added, the "Successfully added to the database" message is displayed. The SBRM application with the specified name is added as a map symbol to the **EMS Applications** topology. It is also added to the **SBRM** topology under the **EMS Applications** topology node in the Integrated EMS tree.*

Adding network elements in Web Client

The Nortel Integrated EMS manages the fault domain and provides a centralized location to access the management interfaces for the USP, Passport 8600, STORM, MS 2000, Session Server, MAS and CICM NEs. The following procedures describes how to add these NEs using Integrated Web Client.

- [Adding an USP NE](#)
- [Adding an Ethernet Routing Switch 8600 NE](#)
- [Adding a STORM NE](#)
- [Adding an MS 2000 NE](#)
- [Adding an MAS NE](#)
- [Adding a Session Server NE](#)
- [Adding an CICM NE](#)

Adding an USP NE

Universal Signaling Points can be managed using Integrated EMS by adding them to the Integrated EMS topology. This procedure describes how to add the USP NE to the Integrated EMS topology using Web Client.

To add the USP NE to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "NE" from the **Type** list box.
- 6 Select the mode of USP NE from the **Mode** list box ("Simplex" or "Duplex"). If you select "Duplex" from the **Mode** list box, you have to enter the inactive agent IP address in the **In-Active Agent IP** field.
- 7 Select "USP" from the **Device Type** list box.
- 8 Select the version of the device from the **Device Version** list box.

If device version is	Do
6.2	follow step 10 to step 18 and step 22
7.0	follow step 9 to step 18 and step 22

	If device version is	Do
	8.0	follow step 9 to step 22
9	Enter the client server IP in the Client Server IP field.	
10	Enter the inactive agent IP address in the Unit1 IP Address field.	
11	Select the Fault Interface from the vertical tab. Note: When adding a USP NE to the Integrated EMS inventory the SNMP attributes (refer to step 12 to step 16) must align with the configuration of the USP network element. In addition, the manager IP address in the USP must be configured to forward its SNMP traps to the Integrated EMS Server application (the Integrated EMS Virtual IP address). The configuration of the SNMP attributes in the USP are described in the <i>USP Security and Administration guide</i> , NN10159-611 and the <i>USP Compact Security and Administration guide</i> , NN10160-611.	
12	Enter the port value "161" (in which the NE agent communicates with Integrated EMS) in the Port field.	
13	Select the SNMP version "from the Version list box. Note: The SNMP version must align with the version configured in the USP Network Element. The default SNMP version in the USP is V3.	
	If the SNMP version is	Do
	v3	follow step 14 to step 15 and proceed to step 17
	v2	proceed to step 16
14	Retain the value "NoAuthNoPriv" for the Security Level list box.	
15	Enter the value for the User name field as specified in <i>USP Security and Administration guide</i> , NN10159-61. Note: The value for the Context name field must be left blank.	
16	Enter the community string in the Community field.	
17	Select the Standby Fault Interface from the vertical tab.	
18	Repeat step 12 to step 16 .	
19	Select the Performance Interface from the vertical tab.	
20	Type the user name for FTP PULL in the User ID field.	

- 21 Type the password in the **Password** field.
- 22 Click the **Add EMS/NE** button to add the USP NE.

*Once the USP NE is added, "Successfully added to the database" message is displayed. The USP NE with the specified name is added as a map symbol to the **Network Elements** topology. It is also added to the **USP** topology under the **Network Elements** topology node in the Integrated EMS tree.*

Note: Only the active USP unit object provides an interface to determine the fault state of the USP. The inactive USP unit object status is in unknown state (map symbol has gray background color). The Integrated EMS dynamically detects when the USP unit has been swacted. When this occurs, it initiates alarm resync with the newly active USP unit and updates the state of the USP unit objects in the Integrated EMS Client to reflect this change in activity. When this occurs the previous active unit object map is changed to unknown state, and the new active unit is updated to reflect the highest alarm state of the USP device. For the color mapping of various object status, refer to the [Significance of map symbol background color](#) table of "[Updating status of objects manually](#)".

Adding an Ethernet Routing Switch 8600 NE

Ethernet Routing Switch (ERS) 8600 NEs can be managed using Integrated EMS by adding them to the Integrated EMS topology. This procedure describes how to add the ERS 8600 NE to the topology using Web Client.

Note: The IP address associated with the OAM&P VLAN must be provided in the Host Name/IP Address field. OAM&P VLAN is the interface from which the messages for ERS 8600 originate.

Required prerequisites for Integrated EMS to receive ERS 8600 fault and performance data

ERS 8600 NEs must be configured to send fault and performance data to Integrated EMS; without this configuration, Integrated EMS receives no fault and performance data from ERS 8600 NEs.

Required prerequisites for launching ERS 8600 Device Manager

ERS 8600 Device Manager must be installed on the client machine in order to launch the GUI. For details of how to install the Device Manager, refer to *Installing ERS 8600 Switch Modules-312749F*.

Adding an ERS 8600 NE using Web Client

To add the ERS 8600 to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.

- 4 Enter the values for the Name, Time Zone, and Display Name fields. For details on these fields, refer to the following table:

Description of fields in the Add EMS/NE page

Field	Description
Name	The field for the host name or IP address of the NE. Note: The IP address associated with the OAM&P VLAN must be provided in the Host Name/IP Address field. OAM&P VLAN is interface from which the messages for ERS 8600 originate.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 5 Select "NE" from the **Type** list box.
- 6 Select "ERS 8600" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Select the **Fault Interface** from the vertical tab.
- 9 Enter the Port in the **Port** field or retain the default value as "161".
- 10 Enter the Community in the **Community** field.
- 11 Select the SNMP Version from the **Version** list box. If you select "v3" from Version list box, select the security level from the Security Level list box. If you select the value "NoAuthNoPriv" from the Security Level list box, enter the following details:
- User Name
 - Context Name (if any)
- If you select the value "AuthNoPriv" from the Security Level list box, enter the following details:
- User Name
 - Context Name (if any)
 - Authentication Protocol

If you select the value "AuthPriv" from the Security Level list box, enter the following details:

- User Name
- Context Name (if any)
- Authentication Protocol
- Privacy Password

12 Select the **Performance Interface** from the vertical tab.

13 Repeat [step 9](#) to [step 11](#).

14 Click the **Add EMS/NE** button.

*Once the ERS 8600 is added, the "Successfully added to database" message is displayed in the status bar. The ERS 8600 NE with the specified name is added as a map symbol to the **Network Elements** topology. It is also added to the **ERS 8600** topology under the **Network Elements** topology node in the Module tree.*

Adding a STORM NE

STORM is the acronym for STORAge Management Card. STORM NEs can be managed using Integrated EMS by adding them to the Integrated EMS topology. This procedure describes how to add the STORM NE to the topology using Web Client.

Note: STORM-Integrated EMS integration is not supported with the STORM dotHill configuration. The dotHill version of the STORM device does not have an SNMP agent to forward or read the faults from the STORM device. Integrated EMS integration is only supported with the new STORM-XTS configuration.

Required prerequisites for Integrated EMS to receive STORM fault and performance data

STORM must be configured to send fault data to Integrated EMS. The STORM has a tool called **commish** which is used to configure the STORM with Integrated EMS server virtual IP address and port for sending the fault data to Integrated EMS; without this configuration, Integrated EMS receives no fault data from STORM. For details, refer to [Configuring STORM for Integrated EMS](#) section.

Required prerequisites for launching STORM Manager

STORM has to be configured using **SSPFS CLI** tool for launching STORM manager from Integrated EMS Client. For details, refer to *ATM/IP Solution-level Configuration Management*, NN10409-500.

Adding an STORM NE using Web Client

To add the STORM to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.

- 4 Enter the values for the Host Name/IP Address and Time Zone fields in the wizard. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE Page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "NE" from the **Type** list box.
- 6 Select "STORM" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box. If "6.2" version is selected, follow [step 8](#) to [step 11](#) and proceed to [step 14](#).
- 8 Select the **Fault Interface** from the vertical tab.
- 9 Enter the port (in which the NE agent communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 10 Enter the community in the **Community** field.
- 11 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:
- User name
 - Context name
- If you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:
- User name
 - Context name
 - Authentication Protocol
- If you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:
- User name
 - Context name
 - Authentication Protocol
 - Privacy Password

- 12 Select the **Performance Interface** from the vertical tab.
- 13 Repeat [step 9](#) to [step 11](#).
- 14 Click the **Add EMS/NE** button to add the STORM.

*Once the STORM is added, "Successfully added to the database" message is displayed. The STORM NE with the specified name is added as a map symbol to the **Network Elements** topology. It is also added to the **STORM** topology under the **Network Elements** topology node in the Module tree.*

Adding an MS 2000 NE

Media Server 2000 NE can be managed using Integrated EMS by adding them to the Integrated EMS topology. This procedure describes how to add the Media Server 2000 (MS 2000) NE to the topology using Web Client.

To add the MS 2000 NE to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "NE" from the **Type** list box.
- 6 Select "MS2000" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Enter the SESM Server IP address in the **SESM Server IP** field.
SESM
 Succession Element and Subnetwork Manager
- 9 Select the **Fault Interface** from the vertical tab.
- 10 Enter the port (in which the NE agent communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 11 Enter the community in the **Community** field.

- 12** Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name

If you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name
- Authentication Protocol

If you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name
- Authentication Protocol
- Privacy Password

- 13** Select the **Fault Interface** from the vertical tab.

- 14** Repeat [step 10](#) to [step 12](#).

- 15** Click the **Add EMS/NE** button to add the MS 2000 NE.

*Once the MS 2000 NE is added, the "Successfully added to database" message is displayed in the status bar. The MS 2000 NE with the specified name is added as a map symbol to the **Network Elements** topology. It is also added to the **MS2000** topology under the **Network Elements** topology node in the Module tree.*

Adding an MAS NE

MAS NEs can be managed using Integrated EMS by adding them to the Integrated EMS topology. This procedure describes how to add the MAS NE to the topology using Web Client.

Required prerequisites for Integrated EMS to receive MAS fault and performance data

MAS must be configured to send fault data to Integrated EMS; without this configuration, Integrated EMS receives no fault and performance data from MAS NEs.

Adding an MAS NE using Web Client

To add the MAS NE to the topology using Integrated EMS Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 5 Select "NE" from the **Type** list box.
- 6 Select "MAS" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.

- 8 Select the **Fault Interface** from the vertical tab.
- 9 Enter the port (in which the NE agent communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 10 Enter the community in the **Community** field.
- 11 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name

If you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name
- Authentication Protocol

If you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:

- User name
- Context name
- Authentication Protocol
- Privacy Password

- 12 Select the **Performance Interface** from the vertical tab.
- 13 Enter the directory name where the CSV file is getting pushed in Integrated EMS Server from the device in the **Directory Name** field.
- 14 Enter the file mask of the CSV file getting pushed in the **File Name** field.

Wildcard support is available for this field.

Example

If the file names starts with "SystemOMs" string, user can enter the value "SystemOMs*.csv".

Note: While configuring each MAS device, ensure that the operational measurement (OM) file names are unique. This is useful to differentiate data transmitted from each of the devices.

- 15** Retain the "PUSH" mode of file transfer selected in the **Mode** list box.

Note: In the Mode list box, the "PUSH" mode of file transfer must be selected.
- 16** Click the **Add EMS/NE** button to add the MAS NE.

Adding a Session Server NE

Session Server NEs can be managed using Integrated EMS by adding them to the Integrated EMS topology. This procedure describes how to add the Session Server NE to the topology using Web Client.

Required prerequisites for Session Server to receive fault and performance data

Session Server NE must be configured to send fault and performance data to Integrated EMS; without this configuration, Integrated EMS receives no fault and performance data from Session Server NEs.

Required prerequisites for launching Session Server

Session Server NE has to be configured using **SSPFS CLI** tool for launching Session Server from Integrated EMS Client. For details, refer to *ATM/IP Solution-level Configuration Management*, NN10409-500.

Adding a Session Server NE using Web Client

To add the Session Server NE to the topology using Integrated EMS Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.
Display Name	The name that must be displayed in the topology for the map symbol.

- 5 Select "NE" from the **Type** list box.
- 6 Select "Session Server" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Select the device mode from the **Mode** list box.
- 9 Select the **Fault Interface** from the vertical tab.
- 10 Enter the port (in which the NE agent communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 11 Enter the community in the **Community** field.
- 12 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context nameIf you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication ProtocolIf you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication Protocol
 - Privacy Password
- 13 Select the **Performance Interface** from the vertical tab.
- 14 Repeat [step 10](#) to [step 12](#).
- 15 Click the **Add EMS/NE** button to add the Session Server NE.

Adding an CICM NE

CICM NEs can be managed using Integrated EMS by adding them to the Integrated EMS topology. This procedure describes how to add the CICM NE to the topology using Web Client.

Required prerequisites for Integrated EMS to receive CICM fault and performance data

CICM Manager must be configured to send fault data to Integrated EMS. The CICM has a script called **snmpri_configure** which is used to configure the CICM with Integrated EMS server virtual IP address and port for sending the fault data to Integrated EMS; without this configuration, Integrated EMS receives no faults from CICM.

Required prerequisites for launching CICM Manager

CICM Manager has to be configured using **SSPFS CLI** tool for launching CICM Manager from Integrated EMS Client. For details, refer to *ATM/IP Solution-level Configuration Management*, NN10409-500.

Adding an CICM NE using Web Client

To add the CICM to the topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Admin** tab in the Web Client.
- 3 Select the **Add EMS/NE** node under the **Network Admin** tree to invoke the Add EMS/NE page in the right-side frame.
- 4 Enter the values for the Host Name/IP Address and Time Zone fields. For details on these fields, refer to the following table:

Description of fields in Add EMS/NE page

Field	Description
Host Name/IP Address	The field for the host name or IP address of the NE.
Time Zone	A list box to select the time zone associated with the object.

- 5 Select "NE" from the **Type** list box.

- 6 Select "CICM" from the **Device Type** list box.
- 7 Select the version of the device from the **Device Version** list box.
- 8 Select the NE unit mode from the **Mode** list box. If "Duplex" mode selected, follow these steps:
 - a Enter the inactive unit IP in the **Inactive-Unit IP** field,
 - b Enter the Card B IP address in the **Card B IP Address** field.
 - c Enter the Card B display name in the **Card B Display Name** field.
- 9 Enter the card location in the **Card Location** field.
- 10 Enter the Card A IP address in the **Card A IP Address** field.
- 11 Select the **Fault Interface** from the vertical tab.
- 12 Enter the port (in which the NE agent communicates with Integrated EMS) in the **Port** field or retain the default value as "161".
- 13 Enter the community in the **Community** field.
- 14 Select the SNMP version from the **Version** list box. If you select "v3" from Version list box, select the security level from the SecurityLevel list box. If you select the value "NoAuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context nameIf you select the value "AuthNoPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication ProtocolIf you select the value "AuthPriv" from the SecurityLevel list box, enter the following details:
 - User name
 - Context name
 - Authentication Protocol
 - Privacy Password
- 15 Select the **Performance Interface** from the vertical tab.
- 16 Repeat [step 12](#) to [step 14](#).

- 17 Click the **Add EMS/NE** button to add the CICM.

*Once the CICM NE is added, the "Successfully added to database" message is displayed in the status bar. The CICM NE with the specified name is added as a map symbol to the **Network Elements** topology. It is also added to the **CICM** topology under the **Network Elements** topology node in the Module tree.*

Using the topology operations in Web Client

This section provides the procedures that describes how to use the various operations in topology GUIs of Integrated EMS Web Client.

- [Editing and viewing object properties using Web Client](#)
- [Using other operations in topology of Web Client](#)

Editing and viewing object properties using Web Client

Application

Use this procedure to modify or view the properties of an object in the IEMS topology using Web Client.

Prerequisites

None

Action

At the IEMS workstation

- 1 Launch the IEMS Web Client. Refer to Launching the IEMS Web Client in *IEMS Basics*, NN10329-111.
- 2 Select the **Integrated EMS Topologies** tab.
- 3 Navigate to the required topology node in the Integrated EMS Topologies tree.
- 4 Click the map symbol label to open the **General Information** window.

Note: The object properties displayed can differ for each component.

A window similar to the following figure opens.

Integrated EMS Topologies → Network Elements

←AMS2 **rajagopal-MS2000**


General


Monitoring


Fault Interface


Performance Interface

General Information

Name	rajagopal-MS2000
Device Type	NE-MS2000
Status	 Clear
Is Managed ?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Display Name	<input type="text" value="raj"/>
Device Version	<input type="text" value="8.0"/>
IP Address	<input type="text" value="192.168.113.201"/>
Web User Name	<input type="text" value="rajagopal"/>
Web Password	<input type="password" value="****"/>

- 5 Select each vertical tab and modify the object properties listed in the table below if required.

Managed object properties in Web Client

Field	Description
General	
Name	Displays the unique object name of the managed object
Device Type	Displays the type of object (element manager, EMS, EMS platform or NE)
Status	Displays the status of the object
Is Managed?	Indicates whether the object is managed or unmanaged
Display Name	Displays the name or label displayed in map symbol
Device Version	Select the version of the device from the drop-down list

Managed object properties in Web Client

Field	Description
IP Address	Modify the IP address of the object
Web User name	Enter your web user name
Web Password	Enter your web password
Monitoring	
Last Status Update Time	Displays the time when the status of the managed object last changed
Last Status Change Time	Displays the time when the status of the managed object last changed
Status Polling Interval (secs)	Modify the Poll Interval for status updates

Managed object properties in Web Client

Field	Description
Fault Interface	If the details are present for the selected object, the details can be modified.
Performance Interface	If the details are present for the selected object, the details can be modified.

- 6** Click the **Update Object** button to update the changes.
- 7** You have completed this procedure.

Using other operations in topology of Web Client

Other operations such as manage or unmanage an object, delete an object, and view related events or alarms can be done in Integrated EMS. These operations are triggered through the menus launched from map symbol.

Manage or Unmanage

You can make Integrated EMS server to stop managing a particular object, by selecting the Unmanage menu item. This menu item can be found in the popup menu that appears when you click the arrow symbol in the map symbol. To unmanage an object in topology, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the required topology node in the Module tree (Integrated EMS Topologies tree) in which the required map symbol is shown.
- 3 Click the arrow of the required map symbol in the topology to invoke the popup menu.
- 4 Select the **Object -->Unmanage** menu command.

To manage an object which is in unmanaged state, follow [step 1](#) to [step 3](#) and select the **Object-->Manage** menu command.

Delete object and traces

An object in the topology can be deleted to remove it from topology. To remove an object from topology using Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the required topology node in the Module tree in which the required map symbol is shown.
- 3 Click the arrow of the map symbol (that needs to be removed) in the topology to invoke the popup menu and select **<Object type name>-->Delete Object and Traces** menu item.

Viewing related events

To view events associated with an object in topology, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2** Select the required topology node in the Module tree in which the required map symbol is shown.
- 3** Click the arrow in the map symbol of the topology to invoke the popup menu.
- 4** Select **Object-->View Events** menu command.

It lists the related events of the object in the Events page.

Viewing related alarms

To view the alarms associated with an object in topology, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2** Select the required topology node in the Module tree in which the required map symbol is shown.
- 3** Click the arrow of the map symbol in the topology to invoke the popup menu and select **Object-->Alarms** menu command.

It lists the related alarms of the object in the Alarms page.

Working with inventory in Web Client

The Inventory maintains the properties of all the managed objects managed in a network. These managed objects and their associated properties are listed in the Inventory view. The information is available in a table format which is called List View. This section provides the procedure that describes how to perform following tasks in inventory:

- [Viewing managed object details](#)
- [Navigating inventory](#)
- [Searching objects in inventory view](#)
- [Working with inventory view](#)
- [Using other operations in inventory view](#)

Viewing managed object details

The details of a managed object such as type, status, managed or unmanaged, display name can be viewed and some of the properties can be modified. This procedure describes how to view the managed object details in Integrated EMS Inventory.

To view the details of managed object and update in Inventory, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Inventory** tab in Web Client.
- 3 Select the required node in the Module tree (Inventory tree).
- 4 Click the required managed object name link under the **Name** column.

The details page of the corresponding managed object is launched.

- 5 Modify the properties in the corresponding horizontal tabs if required as indicated in the [Managed object properties in Web Client](#).
- 6 Click the **Update** button to update the changes.

Navigating inventory

The inventory in Web Client is navigated with the help of navigation tools such as view range, navigator buttons and column reordering. You can sort out the inventory based on your requirements. The following procedures describes how to change managed objects per page, sort and browse inventory.

To navigate to Inventory tab of Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Inventory** tab in Web Client.
- 3 Select the required node in the Module tree (Inventory tree).

The Module tree contains the following nodes:

- Complete View
- EMS
- Platform
- Application
- NE

Clicking each node in the Module tree displays its corresponding Managed Object details.

Browsing the Inventory

The navigator buttons First, Previous, Next, and Last are located below the module menus. The descriptions of the buttons can be found in Description of Buttons in Navigation Bar of "Navigating Events" in the *Integrated EMS Fault Management*, NN10334-911.

Customizing managed objects per page

By default, 50 managed objects are shown per page in the Inventory table. You can change the number of events displayed using the following procedure:

To change the number of managed objects displayed per page in Inventory page, follow these steps:

At Inventory tab in Web Client

- 1 Select required node in the Module tree.

- 2 Select the required page count from the list box to select the entries per page (below the module menus).

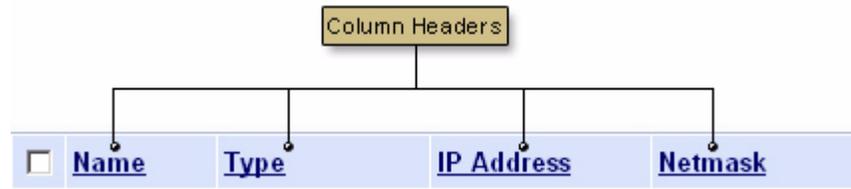
The corresponding number of managed objects are displayed per page.

Customizing the columns

The event's properties are displayed as columns in the Networks Events page. You can show or hide the columns displayed in the Network Events table. The procedure to show or hide the columns is same as the Customizing the Columns procedure in the "Navigating Events" of the *Integrated EMS Fault Management*, NN10334-911.

Sorting events

By default, the network elements are displayed in the order of their discovery and in descending order. This order can be changed using the Sorting option.



To sort the managed objects in Inventory table, follow these steps

At Inventory tab in Web Client

- 1 Select the required node in the Module tree.
- 2 Click the required column header in the table to sort in the column in the ascending order.

Click the column order again to sort it in descending order. If the arrow in the column header is facing upwards means the column is sorted in ascending order and arrow facing downwards means column is sorted in descending order.

Example

If you need to sort the managed objects based on their status, click the Status column header. This sorts the managed objects based on their status with the default order of precedence is Critical, Major, Minor, and Warning. For descending order of the same column, click the Status column header again.

Searching objects in inventory view

The Search option in Web Client facilitates searching for managed objects. The search operation is performed on the entire database and is not restricted to the displayed page alone. You can search for a required managed object based on a general condition or a unique criterion.

To navigate to Inventory tab of Web Client, follow these steps:

At Integrated EMS workstation

- 1** Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2** Select the **Inventory** tab in Web Client.
- 3** Select the required node in the Module tree (Inventory tree).
- 4** Click the **Search** menu item in Module Menu below the Module tab.

The procedure to search for managed objects in Inventory is found in "Searching Events" of the *Integrated EMS Fault Management*, NN10334-911.

Working with inventory view

The managed objects listed in the Inventory can be numerous and hence difficulty arises in identifying managed objects of your interest. A search can be performed to locate the managed objects you are looking for, but if you are looking for a lot of managed objects that satisfy a certain set of criteria, then use the Add Child View, Modify View Criteria, and Remove View options. This helps you in getting the managed objects of your interest alone in that view, instead of doing a search every time.

A Child View that you create is a subset of data that satisfy a given criteria from a larger collection. By creating new views, it is easy to filter and display the required data, and sort through large amount of managed objects details.

To navigate to Inventory tab of Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Inventory** tab in Web Client.
- 3 Select the required node in the Module tree (Inventory tree).

Adding Inventory View

By default, the Inventory module has default types of views such as Complete View, EMS, Platform, Application, and NE. You can create new views under these default views.

Example

You can create a new view named MajorEMS under **EMS** inventory node which shows only managed objects that are in Major status. Within this MajorEMS view, you can create more views, say M1, M2, and so on. M1 can have a different set of criteria, say only NTSTD enabled managed objects in that particular network. Deleting MajorEMS deletes its child views (M1, M2, and so on) as well.

To add the inventory View, follow these steps:

At Inventory tab of Web Client

- 1 Select the required node in Module tree.
- 2 Click **Add Child View** menu item in the Module Menus area.

- The Add Child View page is launched.
- 3 Enter the child view name in the **Child view name field** (mandatory).
 - 4 Select the **Match any of the Following** option if you want to perform a search operation that satisfies any of the matching criteria that you specify. If you need all the matching criteria to be satisfied, select **Match all the Following**.
 - 5 Select the property based on which you need to create the view. For description of the properties, refer to Description of properties in Properties tab of Custom View GUI for Events table of "Custom View for Events: Matching Criteria" in the *Integrated EMS Fault Management*, NN10334-911.

If you have selected property related to date or time, the Date Input Helper button option is useful. Clicking this button invokes the Date Input Helper popup. The current month, year, date, and time is displayed. Select the required date and time for which you need the view criteria to be based on and click the Apply button. On performing this, the Value field is set with the configured date and time.
 - 6 Select the condition based on which you need to restrict your view.
 - 7 Enter the exact information in the **Value** field based on which you need to create the view.
 - 8 Click the **More** button and repeat [step 5](#) to [step 7](#) to add more criteria. Fewer option can be used to remove any criteria.
 - 9 Use **Preview Results** button for a preview of the required view.
 - 10 Click **Add Child View** button to add the child view with the criterion specified.

Modifying Inventory View

You can modify a view to change the criteria or to rename the view. To modify the inventory View, follow these steps:

At Inventory tab of Web Client

- 1 Select the required inventory view in Module tree that has to be modified.
- 2 Click **Edit View Criteria** menu item in the Module Menus area.
The Edit Inventory View Criteria page is launched.
- 3 Modify the child view name in the **Child view name field** (mandatory).

- 4 Follow the [step 4](#) to [step 8](#) in the [Adding Inventory View](#) procedure to modify the criteria.
- 5 Use **Preview Results** button for a preview of the required view.
- 6 Click **Add Child View** to add the child view with the criterion specified.

Removing Inventory View

You can remove child views and the default view in the Inventory tab of Web Client.

To remove the inventory View, follow these steps:

At Inventory tab of Web Client

- 1 Select the required inventory view in Module tree that has to be removed.
- 2 Click **Remove View** menu item in the Module Menus area.
A dialog is launched confirming the removal of inventory view.
- 3 Click **Yes** button to remove the selected inventory view.

Using other operations in inventory view

In the Inventory tab of Integrated EMS Web Client, you can view related events or alarms for a selected object, manage or unmanage objects, and delete objects. This section provides the procedures do these operations.

To navigate to Inventory tab of Web Client, follow these steps:

At Integrated EMS workstation

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Inventory** tab in Web Client.
- 3 Select the required node in the Module tree (Inventory tree).

Managing objects

An object can be managed separately or multiple objects can be managed.

To manage an object in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Launch the Integrated EMS Web Client (refer to "Launching Integrated EMS Web Client" of *Integrated EMS Basics*, NN10329-111).
- 2 Select the **Object-->Manage** menu item from the popup menu.
The Status column of the corresponding object changes to current managed object status.

To manage multiple objects in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Select the check box against the required rows in the Inventory table that needs to be managed.
- 2 Select the **Manage** item from **Operations** list box below the Module menus area.
The Status column of the corresponding object changes to corresponding managed object status

Unmanaging objects

An object can be unmanaged separately, or multiple objects can be unmanaged.

To unmanage an object in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Click the >> icon next to the Name of the object in the Inventory table which needs to be unmanaged.

The inventory popup menu is launched for the object.

- 2 Select the **Object-->Unmanage** menu item from the popup menu.

The Status column of the corresponding object changes to current status of object from "Unknown" status.

To unmanage multiple objects in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Select the check box against the required rows in the inventory table that needs to be unmanaged.

- 2 Select the **Unmanage** item from **Operations** list box below the Module menus area.

The Status column of the corresponding object changes to current status of object from "Unknown" status.

Deleting objects

An object can be deleted from the database, or multiple objects can be deleted.

To delete an object in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Click the >> icon next to the Name of the object in the Inventory table which must be removed.

The inventory popup menu is launched for the object.

- 2 Select the **<object specific menu>-->Delete Object and Traces** menu item from the popup menu.

The object is removed from database and Inventory table is updated.

To delete multiple objects in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Select the check box against the required rows in the Inventory table that needs to be removed.
- 2 Select **Delete Objects** item from **Operations** list box below the Module menus area.

The selected rows are removed from database and the Inventory table is updated.

Viewing related events

The events associated with an object or multiple objects can be viewed from Inventory.

To view events related to an object in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Click the >> icon next to the Name of the object in the Inventory table for which the associated events is listed.
The inventory popup menu is launched for the object.
- 2 Select the **Objects-->View Events** menu item from the popup menu.

The events associated with the object is listed in Network Events page.

Click the Back button of the browser or in Module menus area to get back to previous page.

To view events associated to multiple objects in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Select the check box against the required rows in Inventory table for which associated events are listed.
- 2 Select the **View Events** item from **Events & Alarms** list box below the Module menus area.

The events associated with the object is listed in Network Events page.

Click the Back button of the browser or in Module menus area to get back to previous page.

Viewing related alarms

The alarms associated with an object or multiple objects can be viewed from Inventory.

To view alarms related to an object in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Click the >> icon next to the Name of the object in the Inventory table for which the associated alarms is listed.

The inventory popup menu is launched for the object.

- 2 Select the **Objects-->View Alarms** menu item from the popup menu.

The alarms associated with the object is listed in Alarms page.

Click Back button of the browser or in Module menus area to get back to previous page.

To view alarms associated to multiple objects in the inventory view, follow these steps:

At Inventory tab of Web Client

- 1 Select the check box against the required rows in Inventory table for which associated events are listed.

- 2 Select the **View Alarms** item from **Events & Alarms** list box below the Module menus area.

The alarms associated with the object is listed in Alarms page.

Click the Back button of the browser or in Module menus area to get back to previous page.

Printing Inventory

Printing a Inventory view helps you to gather information on all the elements or those of your interest alone. You can customize a view by adding or removing columns using Customizing the Columns option (refer to Customizing Columns procedure in the "Navigating Events" of the *Integrated EMS Fault Management*, NN10334-911), order the list by sorting, or by creating child views. After customization, use the Print Version menu item to get a printed version of the same.

To print the inventory view, follow these steps:

At Inventory tab of Web Client

- 1** Click the required Inventory node in the Module tree on the left side frame.
- 2** Click the **Print Version** menu item located in the Module menus area.
A new page with the list of Inventory details is displayed.
- 3** Click the **Print** button to print the details listed.