Integrated EMS Fault Management

Introduction

Fault Management is an essential part of network management, Integrated EMS enables you to manage events and alarms raised by various managed objects and inventory details of managed objects. Integrated EMS provides Java Web Start Client and Web Client graphic user interfaces to connect and interact with the Integrated EMS Server. The Integrated EMS Fault Management documentation is divided into following sections:

- Fault Management using Java Web Start Client
  - Working with events
  - Configuring northbound fault feeds
  - Working with alarms
- Fault Management using Web Client
  - Working with events in Web Client
  - Working with alarms in Web Client

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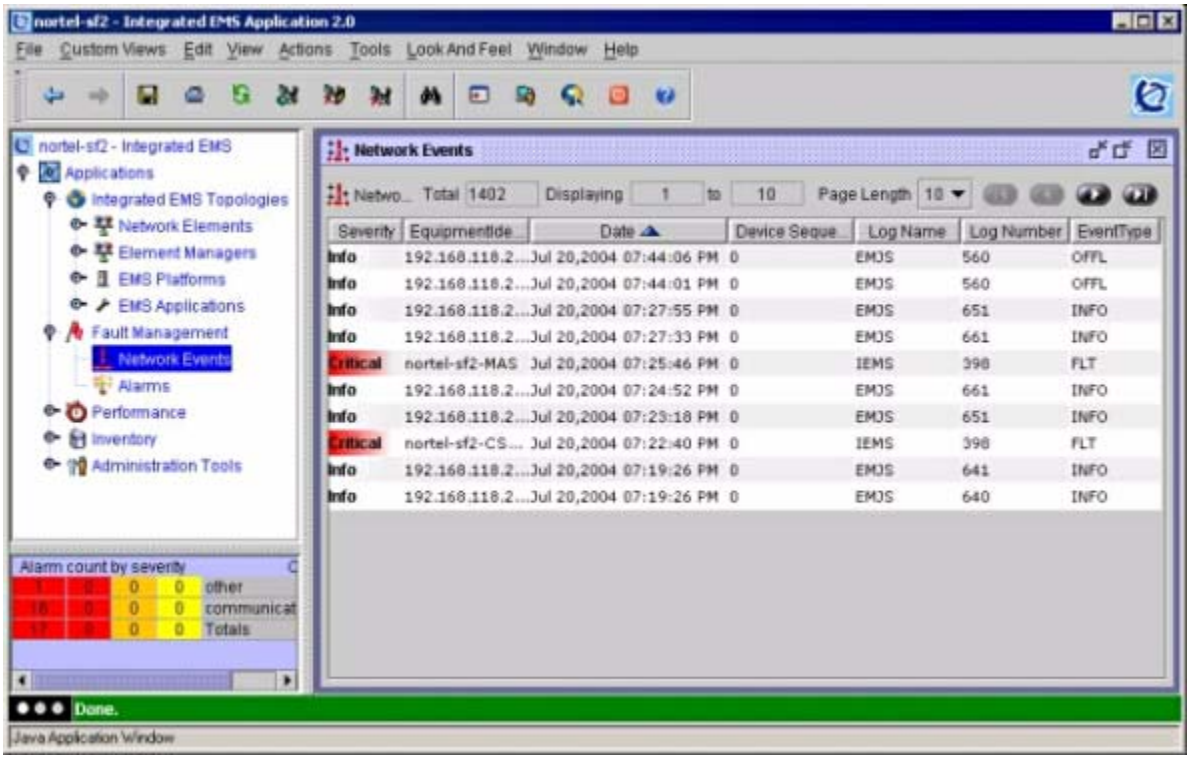
Working with events

The Integrated EMS event browser provides a consolidated historical and real-time view of the events that have occurred in a CS 2000 central office. The event browser is a tool to view events from the Nortel Networks EMSs, NEs, platforms, and applications in a common GUI. The event browser enables the monitoring and debugging of network activities and issues. The following sections provide details of the operations available in the Integrated EMS event browser.



A user can access the Integrated EMS event browser by selecting the Network Events node under the Fault Management node of the Integrated EMS topology tree. This section contains the following sub-sections:

- Viewing event details
- Understanding log details in events
- Navigating events database
- Using other operations in events

- Searching for events
- Managing custom views for events

Viewing event details

The Event Details dialog provides detailed information about the properties of the event that is selected from the displayed event viewer. The properties are displayed in the Event Details dialog in which properties such as Log Name, Log Number, Index, Message, Category, can be viewed.

To launch the Event Details dialog for an event displayed in the Network Events panel, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Select a required event (row) of the table in the **Network Events** panel (or Event Viewer).
4. Double-click any part of the selected event row to view the event property details in Event Details dialog. Alternatively, the Event Details dialog can be displayed using the **Details-->View** menu command.

An example of the Event Details dialog is shown in the following figure:

The event details properties and their descriptions are given in the following table.

Description of properties in the Event Details dialog

Property	Description
Index	A unique numeric ID (equivalent to primary key) generated for each event.
Message	Displays any important additional information of the event.

Description of properties in the Event Details dialog

Property	Description
Category	Displays the category, useful for the categorization of alarms. The alarm category can be one of the following: • communications • qualityOfService • processionError • equipment • environmental • other
Source	Displays the information about the source of the event.
Date/Time	Displays the time stamp of event.
Log Number	This property displays the log number of the event.
ComponentID	Displays the name of the component that raised the event.
EventType	Displays the type of event. For example, "FLT" is displayed for fault.
LogName	Displays the log name of the event. The log name is either present in the event sent by component or inserted by Integrated EMS.
EventLabel	Displays the cause of the event.
ProbableCause	Displays the probable cause of the event.
OfficeIdentifier	Displays the office identifier of the component that raised the alarm.
SequenceNumber	Displays the sequence number of the event.
BodyText	Displays the time stamp of the event, component ID, specific problem for cause of the event and description of the event. The text displayed here varies depending on the device.
EquipmentIdentifier	Displays the component name or IP address that raised the event.
Severity	Displays the criticality of the event.

Note: Opening many Event Details dialogs and closing the most recently opened Event Details dialog hides all the other Event Details dialogs. Other Event Details dialogs can be viewed by moving the Integrated EMS Client main screen or invoking a new Event Details dialog. This issue is experienced with the Integrated EMS Client on a Sun Solaris platform.

Understanding log details in events

Each event displayed in the Network Events panel has the index, message, category, source, date or time, log number, log name and other properties. The traps from SNMP devices and notifications are converted to events by the Integrated EMS. The Integrated EMS assigns a log number to events depending on the source and nature of event. For example, log number "601" is assigned to traps from an unknown device. This section describes how to identify the events using the log details for the notifications in the following categories:

Note: The properties listed in table of each sections below are unique. All other properties in the Event Details dialog are purely depends on the device from which event is raised.

Traps from unknown devices

The traps from unknown devices have the properties as given in the following table.

Values of event properties for traps from an unknown device

Property	Value
Log Number	601
Log Name	IEMS
Event Type	INFO

Values of event properties for traps from an unknown device

Property	Value
Severity	Info
Body Text	Location: <IP address of the event source> Event OID Varbind0: <OID value> .... VarbindN:<OID value>

Unknown traps from a known device

The unknown traps from a known device have the properties as given in the following table.

Values of event properties for unknown traps from a known device

Property	Value
Log Number	602
Log Name	IEMS
Event Type	INFO
Severity	Info
Body Text	Location: <IP address of the event source> Event OID Varbind0: <OID value> .... VarbindN:<OID value>

Missed notifications

The missed notifications have the properties as given in the following table.

Values of event properties for missed notifications

Property	Value
Log Number	603
Log Name	IEMS
Event Type	INFO
Severity	Info
Body Text	Location: <IP address of the event source> Event OID Varbind0: <OID value> .... VarbindN:<OID value>

Unmatched clear event

An unmatched clear event is raised when it is received by the Integrated EMS from the SNMP device, which does not has the corresponding raise alarm. The unmatched clear event have the properties as given in the following table.

Values of event properties for an unmatched clear event

Property	Value
Log Number	604
Log Name	IEMS
Event Type	INFO

Values of event properties for an unmatched clear event

Property	Value
Severity	Clear
Body Text	Location: <IP address of the event source> Event OID Varbind0: <OID value> .... VarbindN:<OID value>

DBCleanupJob event

The DB cleanup job monitors the tablespace size of Integrated EMS, periodically and generates an event when the tablespace size exceeds a given threshold value. For details, refer to the "Using the DB cleanup job" section of *Integrated EMS Security and Administration guide,NN10336-611*. The DBCleanupJob event is generated by Integrated EMS in the following cases:

- Event count has exceeded the configured threshold limit
- Performance table space has exceeded the configured threshold limit.
- The deletion of events is complete

The table space threshold exceeded event have the properties as given in the following table.

Values of event properties for an event count threshold exceeded event

Property	Value
Log Number	606
Log Name	IEMS
Event Type	INFO

Values of event properties for an event count threshold exceeded event

Property	Value
Severity	Info
Body Text	Location: <IP address of the event source> Maximum No. of Event: <number of event> Event count: <event count> Description: <description for the cause of event>

Communication loss event

The events raised by Integrated EMS for communication loss with a managed object (element manager, EMS application, platform or NE managed by Integrated EMS) have the properties as given in the following table.

Values of event properties for communication loss event

Property	Value
Log Number	398
Log Name	IEMS
Event Type	FLT
Severity	Critical
Body Text	Location: <IP address of the event source> Category: <category of event> Cause: <cause of event raised> Time:<time stamp of event> ComponentId: <component name of the device> Description: <description for the cause of event>

Communication regained event

The events raised by Integrated EMS for communication regained with a managed object (element manager, EMS application, platform or NE

managed by Integrated EMS) have the properties as given in the following table.

Values of event properties for communication regained events

Property	Value
Log Number	399
Log Name	IEMS
Event Type	FLT
Severity	Clear
Body Text	Location: <IP address of the event source> Category: <category of event> Cause: <cause of event raised> Time:<time stamp of event> ComponentId: <component name of the device> Description: <description for the cause of event>

Events from performance management jobs

The events from Performance Management Jobs are described in the following sections of *Integrated EMS Performance Management, NN10327-711*:

- Threshold Notifications
- Events from Data Collection Jobs
- Events from Report Jobs
- Events from Transfer Jobs

Searching for missed notifications

Notifications are messages from device agents or messages forwarded by EMSs in the network. Missed notifications are notifications generated by the Integrated EMS. The Integrated EMS monitors the sequence numbers in the incoming fault streams from the managed objects. When it detects a gap in the sequence numbers in the incoming stream, it tries to recover the missed events from the managed device (if the device supports a recovery mechanism). If it is unable to recover the event or if the managed device does not support missed event recovery it generates a missed notification information log.

For example, a device agent is sending notifications to the Integrated EMS. If the nth event sent by the agent has the notification sequence number "2", and the subsequent event sent by the agent has the notification sequence number "4", the Integrated EMS has missed the notification sequence number “3”. In this case, the Integrated EMS generates an event with Info severity. This section explains the procedure to search for such missed notifications.

Searching for missed notifications

To search for all missed notifications from EMS/NEs managed by Integrated EMS, follow these steps:

At the Integrated EMS workstation

1 Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.

2 Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.

3 Ensure the Category column appears in the **Network Events** panel in the Integrated EMS Client. If the Category column is not visible, follow these steps to make the Category column appear:

1. Right-click the **Network Events** node to display the popup menu.
2. Select the **Custom Views-->Modify Custom View** menu command to launch the Specify Event Filter Criteria dialog for the Network Events panel.
3. Click the **Select Props To View** button to display the **Select Table Columns** dialog.
4. Check the **category** check box.

5. Click the **OK** button to close the **Select Table Columns** window.
6. Click the **Apply Filter** button to save the changes and then close the window using **Close** button.

4 Select the **Edit-->Search** menu command to display the **Search** dialog.

5 Select the **Match all of the following** option, since two search criteria have to be satisfied.

6 Select the "Severity" value from the first list box in **Search Criteria** panel.

7 Select the "equals" value from the second list box in **Search Criteria** panel.

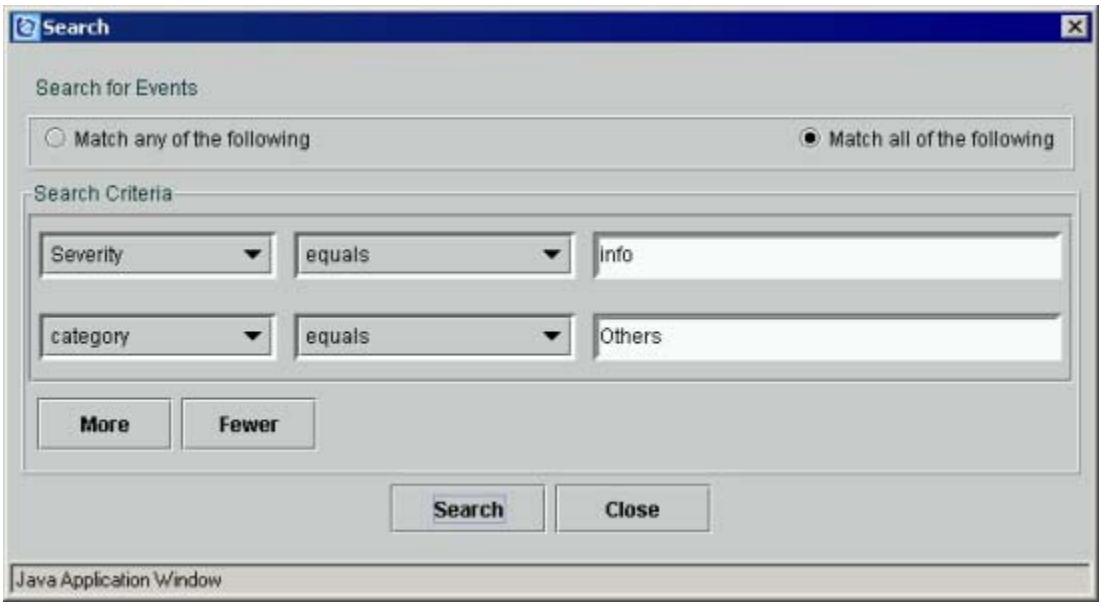
8 Enter the text "Info" in the text field present as the third field in **Search Criteria** panel.

9 Click **More** button to add another criteria. You can find another row of three fields added in **Search Criteria** panel.

10 Select the "category" value from the first list box in the second row of **Search Criteria** panel.

11 Select the "equals" value from the second list box in the second row of **Search Criteria** panel.

12 Enter the text "Others" in the text field (which is the third field in the second row of the **Search Criteria** panel). Check whether you have specified the criteria in the **Search** window similar to the following figure.



13 Click the **Search** button to search for the events from unknown devices.

The missed notifications are listed in the Network Events panel.

Note: To monitor the missed notifications, create an events custom view. For details on creating a custom view, refer to the "Managing custom views for events".

Creating an Events Custom View for missed notifications

To create the events custom view for missed notifications, follow these steps:

At the Integrated EMS workstation

1 Follow the step 1 to step 3 in the Searching for missed notifications section.

2 Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.

3 Right-click and select the **Custom Views-->Add Custom View** menu command.

The Specify Event Filter Criteria window is displayed.

4 Enter the text "Missed Notifications" in **Filter Value Name** field.

5 Click the **Additional table columns** button.

The User defined table columns dialog is launched.

6 Check the Log Name and Log Number text boxes under **Display Name**.

7 Click the **OK** button.

The User defined table columns dialog is closed and returns back to the Select Table Columns window.

8 Click the **OK** button.

The Select Table Columns window is closed and returns to the Specify Filter Criteria window.

9 Click the **Additional Criteria** button.

The criteria dialog is launched.

10 Type the text "logNumber" in the field under the Property Name column since the criteria is based on log number.

11 Type the value "603" in the field under the Match Criteria column since the criteria is based on this log number.

12 Click the **More** button.

A row is added below the existing row.

13 In the second row, type the value "logName" in the field under the Property Name column since the criteria is also based on log name.

14 Type the value "IEMS" in the field under the Match Criteria column since the criteria is based on this log name.

15 Click the **OK** button.

The Criteria dialog is closed and returns to the Specify Filter Criteria window.

16 Click the **Apply Filter** button to create the custom view for missed notifications.

17 Click the **Close** button to close the dialog.

Note: The search criteria for a custom view can be modified after it is created. This is achieved by right-clicking the custom view node (under Fault Management-->Network Events node of Integrated EMS tree) and selecting the **Modify Custom View** option from the Custom Views menu.

The custom view can also be removed by right-clicking the custom view and selecting the **Remove Custom View** option from the Custom Views menu.

Navigating events database

You can navigate the events database using different properties. By navigating the database, the data can be sorted as required. Various tools are provided for easy navigation, including a view range, navigator buttons, and a sort facility.

Using various options in the Navigation toolbar

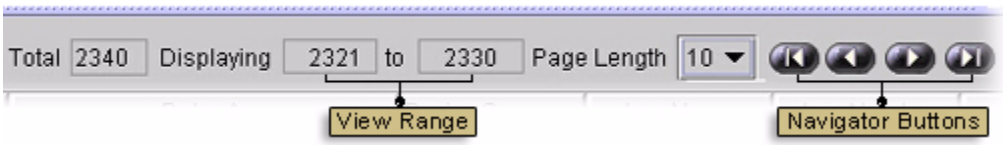
To locate the Navigation toolbar, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree. The Navigation toolbar is displayed in the top part of the **Network Events** panel.

The different ways in which the events database can be navigated are listed below:

View range: The range of rows that are displayed in the table. It is placed on top of the Network Events panel. The user can select the default page length from the Page Length list box.



Navigator buttons: The four navigator buttons, first, previous, next, and last, are located at the top of the internal frame. The descriptions

of the buttons in the order they are displayed are given in the following table.

Description of buttons in Navigation bar

Tool button	Icon	Description
First		This button is used to view the first page of the panel that displays the first set of events retrieved from the database.
Previous		This button is used to view the previously viewed page of the panel that displays the set of events previous to the currently viewed events.
Next		This button is used to view the next page of the panel that displays the next set of events to the currently viewed events.
Last		This button is used to view the last page of the panel that displays the last set of events retrieved from the database.

Note: By default, the various pages of the Network Events panel or event viewer panel show the latest events at the top since the list is sorted by the Date column.

Using other options

Sort: The data can be sorted based on the column type and the details can be viewed in ascending or descending order. The direction of sorting (ascending or descending) is indicated with arrows.

- **Server-side sorting:** This means the sorting of all the rows present in the events database and displaying the first set of rows in the Network Events panel. A single click on the column header performs server-side sorting. Repeated clicks on the same column header determines the sort direction, and toggles between ascended

sorting and descended sorting. The sort indicators for server-side sorting are given in the following table.

Sort Indicator	Purpose
	For server-side sort in ascending order.
	For server-side sort in descending order.

- **Client-side sorting:** This means the sorting of all the rows available in the Networks Events Panel of the Integrated EMS Client and displaying the first set of rows in the Network Events panel. Pressing the Ctrl key and clicking on the column header invokes sort client-side sorting. Subsequent clicks on the same column header determines the sort direction. The sort indicators for client-side sorting given in the following table.

Sort Indicator	Purpose
	For client-side sort in ascending order.
	For client-side sort in descending order.

Both server-side and client-side sorting can be performed for one column as required. The sorting is indicated by the combination of the above indicators.

Column reordering: The columns can be reordered by dragging a column header and moving it to the required place in the table.

Using other operations in events

This section deals with operations, including the saving and printing of generated events and viewing of alarms related to the events. The save option is used to save the current range of event data displayed on the page. The print option prints the current range of event data displayed in the page. Alarms that are generated from the corresponding events can also be viewed.

Saving events in a flat file

To save all the events displayed in the Network Events panel, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Select the **Actions-->Save to File** menu command to launch the Save Event file on Remote Server window.
4. Enter the flat file name (in which the event details are saved) in the **File Name** field.
5. Click the **Save File** button to save the event details in the specified file. The file is saved in the state directory in the <IEMS Home> directory.

   Note: Selecting the **Save** button in the toolbar or selecting the **Actions-->Save To File** menu command saves the current range of data displayed in the Event Viewer in the style of the current custom view.

The file is saved in ASCII text format with values in each column separated with a ":"(colon). For example, the following text is saved, which is equivalent of a row in the Network Events panel:

```
Critical: Jul 25,2003 04:06:31 AM: 0: null: IEMS:
398: FLT
```

Viewing related alarms

To view the related alarms for a particular event, follow these

steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Select a required event (row) of the table in the **Events Viewer**.
4. Select the **View-->Alarms** menu command to display the related alarms of the selected event in the Alarms panel.

Viewing related topology

To view the related topology for a particular event, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Select a required event (row) of the table in the **Events Viewer**.
4. Select the **View-->Show Map** menu command to display the related topology of the selected event.

Printing events

To print the events in the Network Events panel, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Select the required range of rows in the table in the Events Viewer panel to be printed.

4 Select the **Actions-->Print** menu command to print the range of event data in the current custom view that is displayed on the page. This print command is sent to the default printer configured for the Integrated EMS Server.

Note: The Integrated EMS Server has to be configured to use the print option. Refer to the "Configuring a printer for the Integrated EMS" of the *Integrated EMS Security and Administration, NN10336-611* for more details.

Searching for events

The search events function enables the user to search for related events from the event database. The search operation is performed on the entire database and is not restricted to the displayed event viewer alone. The search feature allows for specific or general condition searches.

To search for events, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Launch the search dialog using the **Edit-->Search** menu command or using the find button in the toolbar.
4. Select the **Match any of the following** or **Match all of the following** radio button to specify whether all or any of the search criteria must be satisfied.
5. Specify the one or more search criteria.

   More search criteria can be added using the More button and last search criteria in the window can be removed using the Fewer button. The first option in the search window is a list box listing the existing column headers in the Events table of the

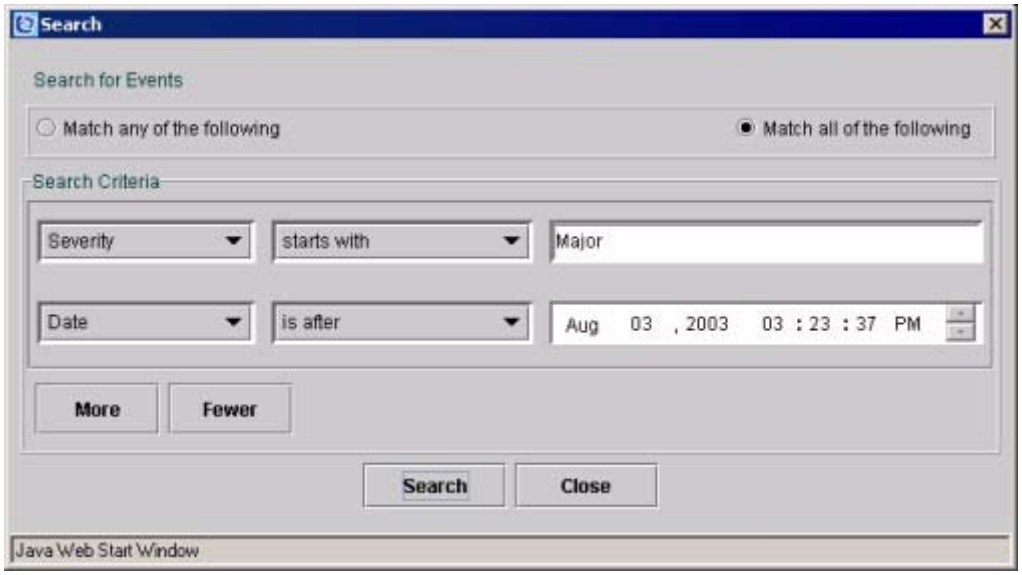
Events panel. The second option has two different sets of criteria to search with:

- Normal set of criteria, which consists of
  - starts with
  - doesn't start with
  - ends with
  - doesn't end with
  - contains
  - doesn't contain
  - equals
  - not equals
- Date / Time criteria, which consists of
  - is before
  - is after
  - equals
  - not equals

  The third option is a data field or the Date/Time component for entering the specific search data. The Date/Time component by default shows the current date and time but requires the month, date, year, hour, minute, second, and

am/pm indicators which can be selected using the up and down arrows.

The following figure shows the Search dialog and some of the available options to search for a specific event.



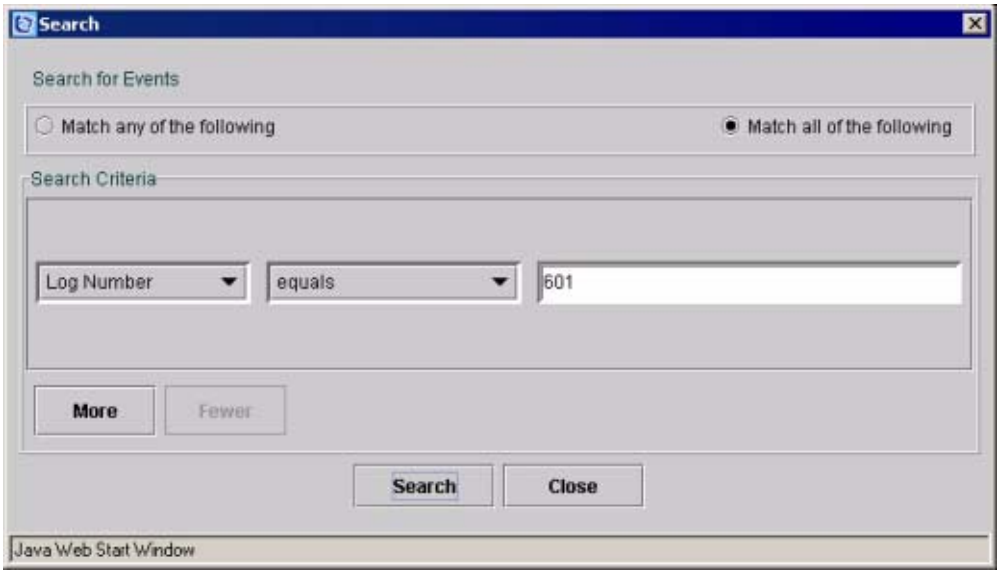
Searching for events raised by an unknown device

The events from an object (that is present in the Integrated EMS database) are received by the Integrated EMS Client and displayed in the Events panel with the severity, source, date, and other properties. The events received from devices that are not part of Integrated EMS database are known as “unknown devices”. The events from these devices are received and displayed in the Events panel. The events from unknown devices have the source field value "Unknown Device". This section explains how to search for events from an unknown device.

To search events from unknown devices in the Integrated EMS Client, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Select the **Edit-->Search** menu command to launch the Search dialog.
4. Select "Log Number" value from the first list box in the Search Criteria panel.
5. Select "equals" from the second list box in the Search Criteria panel.
6. Enter the text "601" in the text field as shown in the figure below.



7 Click the **Search** button to search for events from unknown devices.

Note: To monitor the events from unknown devices, create an events custom view. For details on creating a custom view, refer to the “Creating custom views for events” section.

Managing custom views for events

A custom view is an option to view a subset of data that satisfies a given criteria from a large collection.

To go to the Network Events node in the Integrated EMS Client, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.

Some special features of custom views are:

- View event of specific criteria
- The update of data is Dynamic
- The 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 these states
- The custom view can be modified
- The custom view can be renamed

The features listed above can be performed as shown in the following table.

Tool button in toolbar	Menu bar option	Shortcut	Description
	Custom Views--> Add Custom View	Ctrl+N	This option adds a new custom view with the given criteria. When this command is chosen by the user, a custom view property sheet is displayed on the screen. For details on using search criteria, refer to Using search criteria section of Setting the search criteria for a custom view of events. The fields in the Tree Node Properties tab can also be used for configuring a custom view. For details on using tree node properties, refer to Setting the tree node properties of Setting the search criteria for a custom view of events. After the form is completed and submitted, the new custom view is created can be seen in the tree on the left.
	Custom Views--> Remove Custom View	Ctrl+D	Removes a custom view. The parent custom view (Network Events) cannot be removed. If a custom view has one or many custom child views, both the parent and child views are removed. The main parent custom view (Network Events) cannot be removed. Selecting the Remove Custom View option asks for a confirmation to remove the custom view.
	Custom Views--> Modify Custom View	Ctrl+M	Modifies any custom view.

Tool button in toolbar	Menu bar option	Shortcut	Description
	Custom Views--> Save Custom View	Ctrl+S	Saves the current state of the custom view, such as column order, sort order, and others.
	Custom Views--> Rename Custom View	Alt+F2	This option renames the current custom view. Press the Esc key before completing to cancel the rename.

Setting the search criteria for a custom view of events

This section explains the procedure to specify the search criteria in the Specify Event Filter Criteria window and Tree Node Properties window.

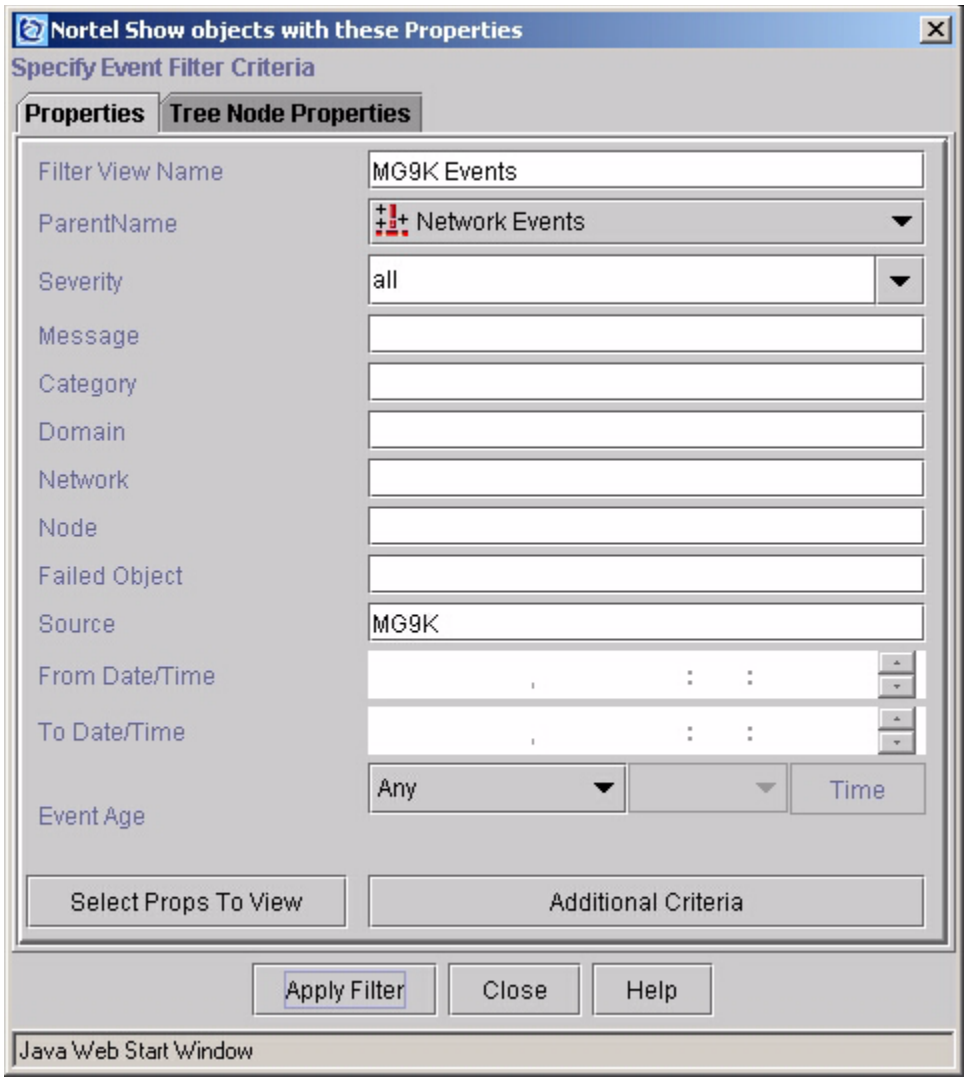
Using search criteria

To launch the Specify Event Filter Criteria window, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Select the **Custom Views-->Add Custom View** menu command.

   The Specify Event Filter Criteria window is displayed, similar to the following figure.


Nortel Show objects with these Properties
Specify Event Filter Criteria
Properties
Tree Node Properties
Filter View Name
MG9K Events
ParentName
Network Events
Severity
all
Message
Category
Domain
Network
Node
Failed Object
Source
MG9K
From Date/Time
To Date/Time
Event Age
Any
Time
Select Props To View
Additional Criteria
Apply Filter
Close
Help
Java Web Start Window

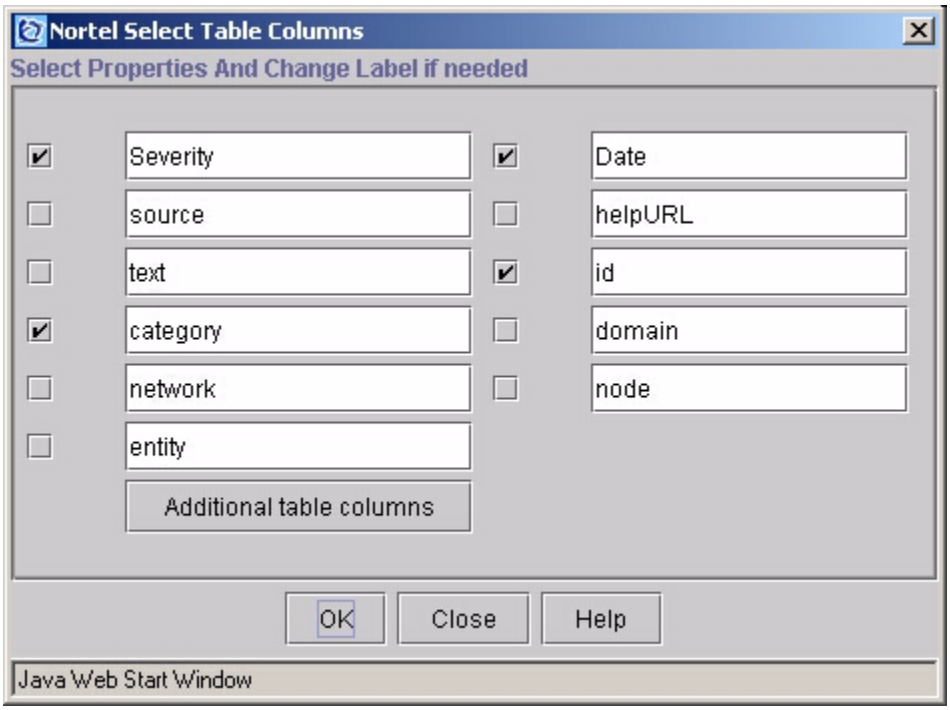
The description of the fields found in the Properties tab of the Specify Event Filter Criteria window is given in the following table.

Properties in Properties tab of Specify Event Filter Criteria window

Property	Description
Filter View Name	Specifies the name of the custom view being created.
Parent Name	Determines the node in the Integrated EMS tree under which this custom view is to be added. The default value is "Network Events". This field can be modified by selecting the node under which the new custom view is added.
Severity	Determines the severity of the event to be included in the view. Multiple severities can be assigned by typing the severities separated with commas.
Message	Specifies all or part of a message associated with the events to be displayed. **Example** Unable to communicate with managed device
Category	Specifies the category of the events. The various categories of events are: • communications • qualityOfService • processingError • equipment • environmental • others
Domain	Specifies the domain name of the events to be displayed in this view. The domain-specific information is based on physical location, functional categorization, or logical categorization of the source of the event.
Network	Specifies the network to which the source of the event belongs
Node	Specifies any additional information about the source of the event. **Example** CS 2000 Manager

Properties in Properties tab of Specify Event Filter Criteria window

Property	Description
Failed Object	Specifies the information about the specific entity that is primarily responsible for the occurrence of this event.
Source	Specifies the information about the source of the event.
From Date/Time	Specifies the beginning of the date or time range to be displayed in the custom view.
To Date/Time	Specifies the end of the date or time range to be displayed in the custom view.
Event Age	Specifies the criteria to be used to filter events based on the age of the event. The age can be in minutes, hours, days, today, yesterday, or all these criteria together.
Select Props To View	Click this button to open a window (similar to the following screen shot) with the default properties that are to be shown in the Network Events table.
Additional Criteria	Selecting this button invokes a dialog in which more criteria can be added.

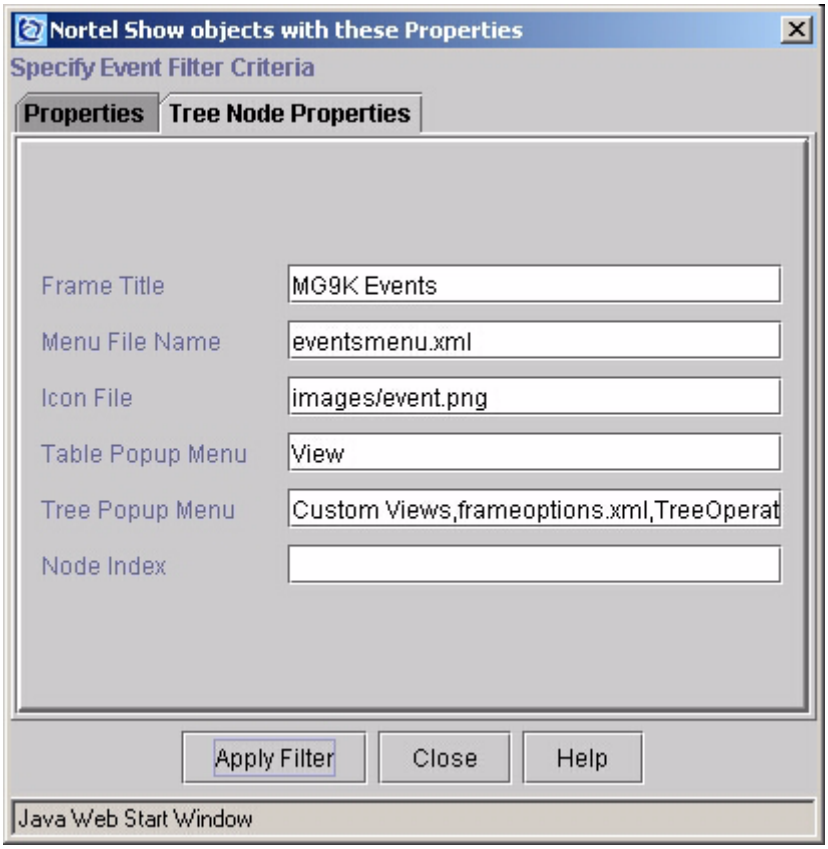


Note: If all the above parameters (except for filter view name) are left blank, the default value "all" is assigned. Date/Time properties by default show the current date and time, but the month, date, year, hour, minute, second, and am/pm indicators are required. This is chosen using the up and down arrow keys.

The age of an event denotes the time lapsed since the last modification of the event in the Integrated EMS Server.

Setting the tree node properties

The tree node properties determines the way the subset of data is presented. This is performed by selecting the Tree Node Properties tab in the Specify Event Filter Criteria window.



The description of each field in the Tree Node Properties tab is given in the following table.

Properties in Tree Node Properties tab of Specify Event Filter Criteria window

Property	Description
Frame Title	Specifies the name to be displayed on the title bar of the custom view's internal frame.
Menu File Name	Specifies the panel-specific menu file name for the **Network Events** panel. Do not modify this field.
Icon File	Indicates which icon 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 <IEMS Home> directory (or any sub directory).
Table Popup Menu	Specifies the file name of the menu used to display a contextual menu for the objects displayed in the table of the **Network Events** table. Do not modify this field.
Tree Popup Menu	Specifies the file name of the menu used to display a contextual menu for the **Network Events** node in the Integrated EMS tree. Do not modify this field.
Node Index	Specifies 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. The values must be less than the number of custom views under the selected parent node in the parent node. **Example** For example, if you want to add the new custom view after the first custom view in the list, enter 1 in the Node Index field.

Example for creating a custom views for events

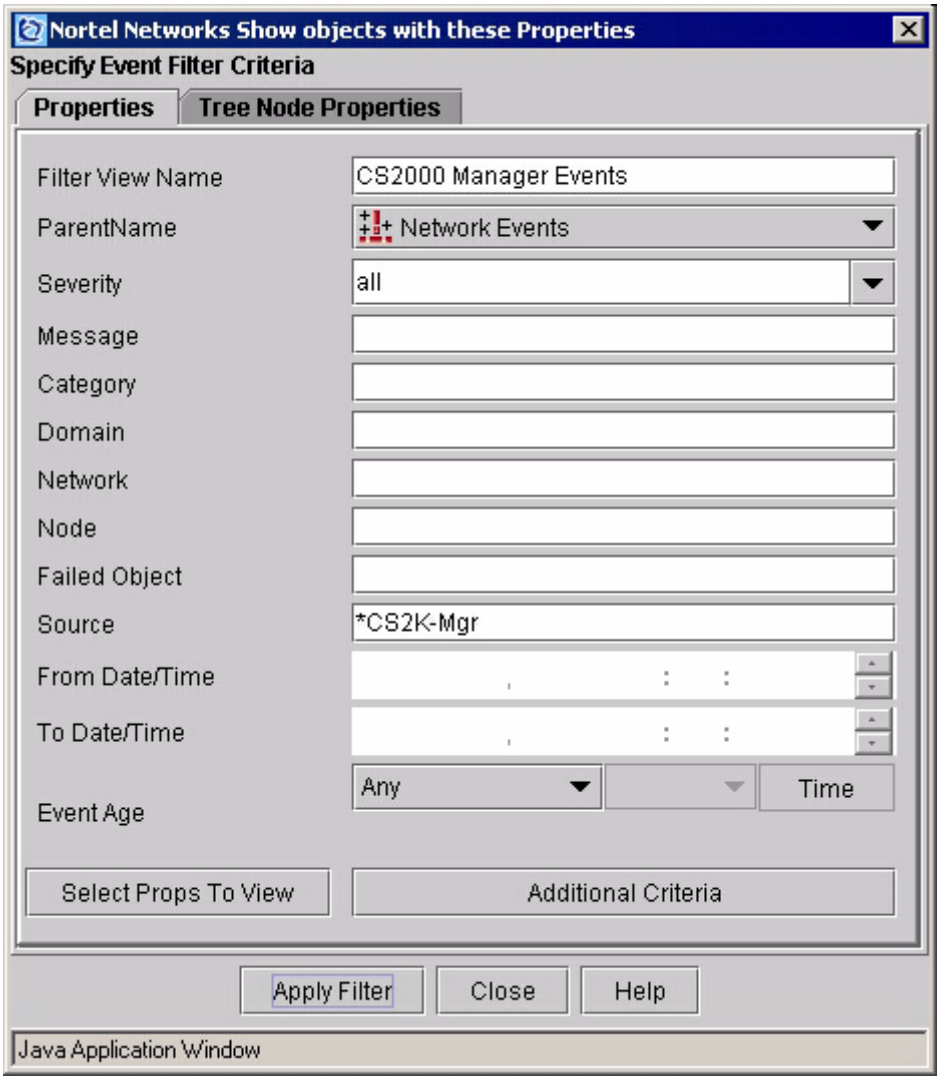
This section provides an example of how to create a custom view for events from a CS2000 Core Manager.

To create a custom view for events from all the CS 2000 Core Manager objects, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Network Events** node under the Fault Management node in the Integrated EMS tree.
3. Right-click and select the **Custom Views-->Add Custom View** menu command.

   The Specify Event Filter Criteria window is displayed.
4. Enter the text "CS2000 Manager Events" in the **Filter View Name** field.
5. Enter the text "*CS2K-Mgr" in the **Source** field. Refer to the following figure.



6 Click **Select Props To View** button to launch the **Select Table Columns** window.

7 Ensure the following text boxes are selected:

- severity
- date
- network
- node

8 Click the **OK** button to apply the changes and close the **Select Table Columns** window.

9 Click the **Apply Filter** button to create a custom view for events from CS 2000 devices.

10 Click the **Close** button to close the dialog.

Configuring northbound fault feeds

The Integrated EMS standardizes the fault interfaces from the various EMSs, NEs, applications, and platforms that it manages. It receives events from these interfaces and converts them into a common format. The Integrated EMS supports the following northbound event interfaces:

- SCC2
- SNMP
- Customerlog SYSLOG
- NTSTD

Providing a common set of northbound OSS interfaces that are based on common standards simplifies the effort for third party vendors to integrate and monitor the event stream from a Nortel Networks office.

The following sub-sections describe the configuration of these interfaces in detail:

- Configuring SCC2 northbound fault feeds
- Configuring SNMP northbound fault feeds
- Configuring SYSLOG customerlog configuration
- Configuring NTSTD northbound fault feeds

This section also explains the procedure to configure the northbound fault filter in the Configuring the northbound fault filter section.

Configuring SCC2 northbound fault feeds

The Integrated EMS aggregates the event streams received from the EMSs, NEs, applications, and platforms that it manages. It normalizes the events received from these streams and forwards the events over its northbound interfaces such as SCC2, SNMP, SYSLOG and NTSTD. Clients who wish to monitor the Integrated EMS SCC2 event stream must have their host address configured through the SCC2 host configuration interface. This section describes how to configure the northbound SCC2 interface. The SCC2 northbound fault feed contains logs for all events (fault and regular information).

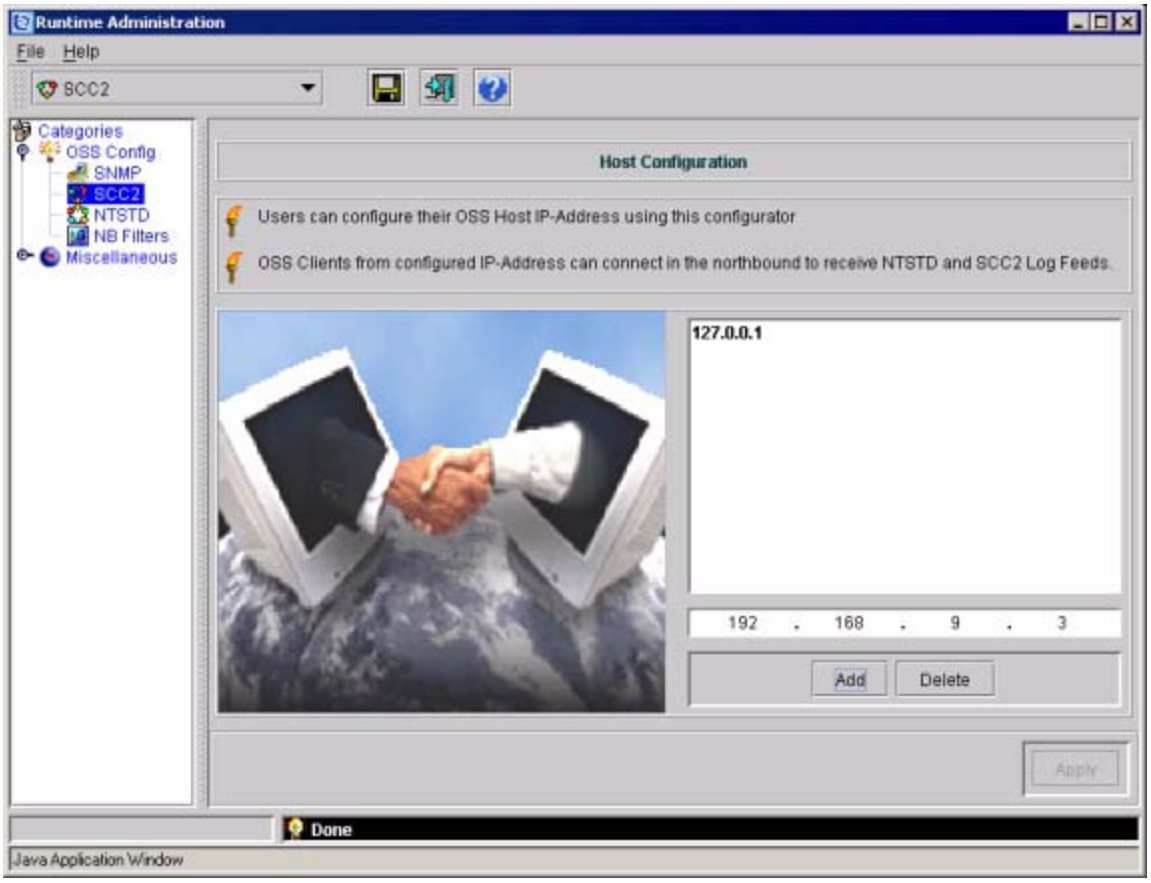
Configuring the SCC2 fault feed hosts

To configure the SCC2 northbound fault feed, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Launch the Runtime Administration window using the **Tools-->Runtime Administration** menu command.
3. Select the **SCC2** node under OSS Config node.

   The SCC2 Host Configuration GUI is displayed in the right-side frame as shown in the following figure.



4 Enter the IP address of the host (to which the northbound fault feeds needs to be forwarded) in the IP address field.

5 Click the **Add** button to add the IP address to the list of northbound host.

6 Click the **Apply** button to save the settings.

Note: Click the **Apply** button after adding the IP address to the list. Otherwise, the added IP address is not saved.

7 Close the dialog using the Exit tool button to return to the Integrated EMS Client.

Removing a SCC2 fault feed host

To remove the SCC2 fault feed host, follow the steps:

At the Integrated EMS workstation

1 Select the required SCC2 fault feed host in the SCC2 Host Configuration window.

2 Click the **Delete** button to remove the IP address.

3 Click the **Apply** button to save the settings.

Viewing the SCC2 logs

The SCC2 logs can be viewed within the Integrated EMS Server. Before viewing the SCC2 logs, the host IP address from the machine trying to view the logs must be added in the SCC2 Configuration GUI as specified in the "Configuring the SCC2 fault feed hosts". To view the SCC2 logs in the Integrated EMS Server running on host named **succession-sol1** (for example), follow these steps:

At the Integrated EMS workstation

1 Connect to the host on which Integrated EMS server is running using telnet.

2 Enter the following command in the command prompt:

```
telnet succession-sol1 8556
```

Note: The succession-sol1 specified in above the command is virtual host name.

Configuring SNMP northbound fault feeds

Clients who wish to monitor the Integrated EMS SNMP trap event stream must have their host address configured through the SNMP northbound OSS configuration interface. This section describes how to configure the northbound SNMP interface.

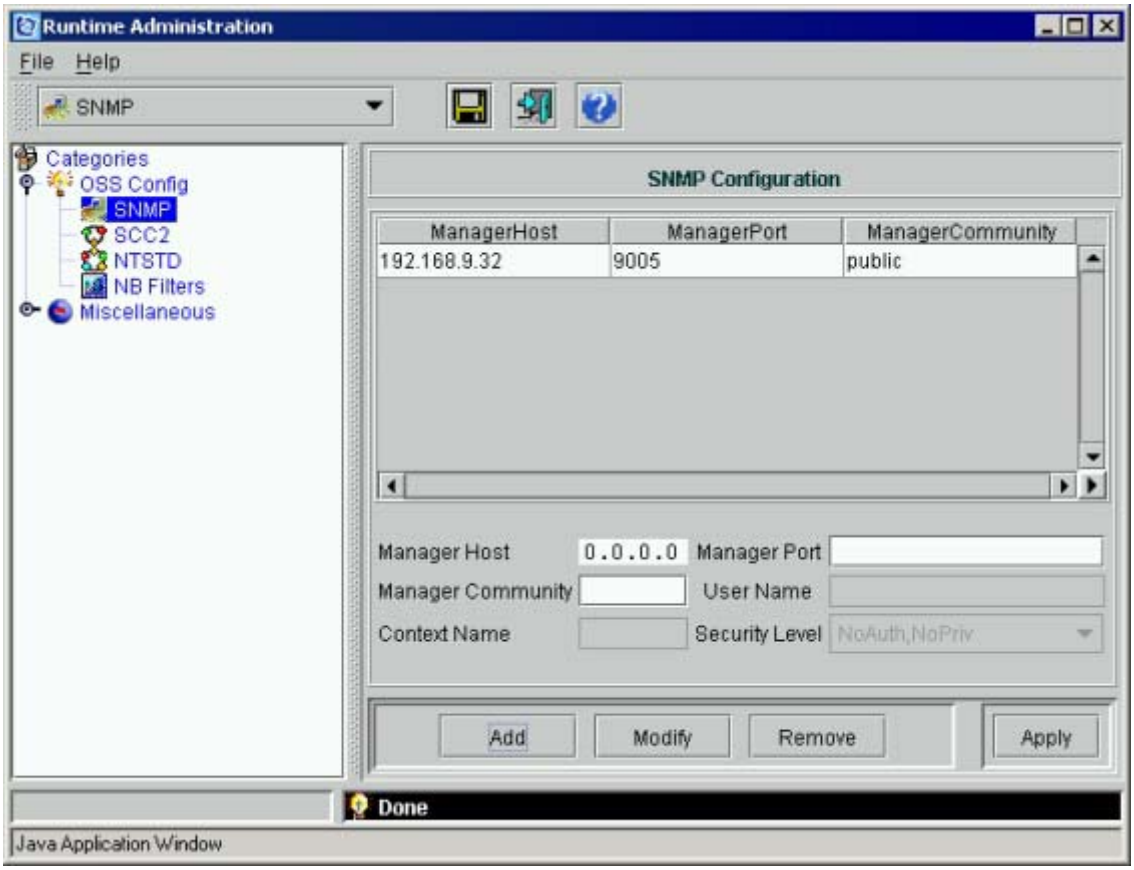
Adding an SNMP fault feed host

To add SNMP northbound fault feeds, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Launch the Runtime Administration window using the **Tools-->Runtime Administration** menu command.
3. Select the **SNMP** node under OSS Config tree.

   The SNMP Configuration GUI is displayed in the right-side frame as in the following screen shot.



4 Enter the manager host IP address (to which the northbound fault feeds needs to be forwarded) in the **Manager Host** field.

5 Enter the port (in which the SNMP fault feeds are sent) in the **Manager Port** field.

6 Enter the manager community in the **Manager Community** field.

7 Click the **Add** button to add the manager host and port to the northbound host table.

8 Click **Apply** button to save the settings.

Note: Click the **Apply** button after adding the host configuration details to the list. Otherwise, added host configuration details are not saved.

9 Click the exit tool button to close the dialog.

Note: By default, the following attribute values are used for configuring SNMP northbound fault feed. The administrator can change the above attribute values. Refer the "Changing

attributes for SNMP fault feeds" of Integrated EMS Security and Administration guide,NN10336-611 to modify these values.

- SNMP port: 8001
- read community: public
- write community: public
- SNMP version: v2c

Removing or modifying SNMP fault feed hosts

Removing SNMP Fault Feed Hosts

To remove an SNMP Fault Feed Host, follow these steps:

At the SNMP Configuration window

1. Select the required SNMP fault feed host details from the table in the **SNMP Host Configuration** window.
2. Click the **Remove** button to remove the required SNMP Fault Feed host details.
3. Click the **Apply** button to save the settings.

Modifying SNMP Fault Feed Hosts

To modify existing SNMP Fault Feed Host details in the list, follow these steps:

At the SNMP Configuration window

1. Select the required manager host details row in the northbound host table.
2. Modify the manager host IP address (to which the northbound fault feeds needs to be forwarded) in the **Manager Host** field.
3. Modify the port (in which the SNMP fault feeds are sent) in the **Manager Port** field.
4. Modify the manager community in the **Manager Community** field.
5. Click the **Modify** button to modify the host details in northbound host table.

Configuring SYSLOG customerlog configuration

The SSPFS CLI tool allows a craftperson the ability to add or delete one or more Integrated EMS northbound Customerlog clients. This tool is accessible to admin users on the Integrated EMS SSPFS server and is accessed by typing 'CLI' in a UNIX XTERM session. This section provides Integrated EMS SYSLOG configuration examples to route the consolidate Integrated EMS customerlog event stream to another server.

Integrated EMS Server Customerlog logging: The local7.notice SYSLOG facility has been reserved to handle the consolidated Integrated EMS customerlog event stream. By default this stream is configured to be recorded in the Integrated EMS Customerlog in the */var/log* directory on the Integrated EMS server.

Adding a northbound SYSLOG customerlog client

To add a new northbound SYSLOG customerlog client, follow these steps:

At the Integrated EMS Server

1 Connect to the host on which Integrated EMS server is running using telnet.

Note: The remote Syslog client must be in-service. Facility local7.notice is reserved for routing the consolidated northbound Integrated EMS customerlog stream.

2 Type cli in the command prompt to get a list of Command Line Interface Options.

```
wnc0y0kz:/>cli
```

and pressing the Enter key.

Example response

```
Command Line Interface
1 - View
2 - Configuration
3 - Other
X - exit
select -
```

3 Enter the number next to the "Configuration" option in the menu.

Example response

```
Configuration
```

```
1 - NTP Configuration
2 - Apache Proxy Configuration
3 - DCE Configuration
4 - OAMP Application Configuration
5 - CORBA Configuration
6 - IP Configuration
7 - DNS Configuration
8 - Syslog Configuration
9 - Database Configuration
10 - NFS Configuration
11 - Bootp Configuration
12 - Restricted Shell Configuration
13 - Succession Element Configuration
14 - chg_tz (Change Timezone)
15 - login_session_timeout (Login Session
Timeout Configuration)
16 - snmp_poller (SNMP Poller Configuration)
 X - exit
select -
```

4 Enter the number next to the "Syslog Configuration" option in the menu.

Example response

```
Syslog Configuration
 1 - list_syslog (List a system's syslog
configuration)
 2 - add_syslog (Add a syslog configuration
entry)
 3 - del_syslog (Remove a syslog configuration
entry)
 4 - route_syslog_on (Route syslog to remote
host)
 5 - route_syslog_off (Turn off syslog
re-direction to a remote host)
 X - exit
select - 4
```

5 Enter the number next to the "route_syslog_on" option.

Example response

```
=== Executing "route_syslog_on"
Available facilities are:
local1.notice
local7.notice
Please enter the facility to be routed:
local7.notice
Facility: local7.notice
```

```
Enter IP address to route logs to:
```

6 Enter the IP address to which the syslog logs to be feeded. For example, if "191.142.106.26" is provided.

Example response

```
Enter IP address to route logs to:191.142.106.26
191.142.106.26 is alive
=== "route_syslog_on" completed successfully
```

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". This is so because, 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 incorrect addressing.

Deleting a northbound SYSLOG customerlog client

To delete an existing northbound SYSLOG customerlog client, follow these steps:

At the Integrated EMS Server

1 Connect to the host in which Integrated EMS server is running using telnet.

Note: Facility local7.notice is reserved for routing the consolidated northbound Integrated EMS customerlog stream.

2 Type cli in the command prompt to get a list of Command Line Interface Options.

```
wnc0y0kz:/>cli
```

and pressing the Enter key.

Example response

```
Command Line Interface
1 - View
2 - Configuration
3 - Other
X - exit
select -
```

3 Enter the number next to the "Configuration" option in the menu.

Example response

```
Configuration
1 - NTP Configuration
```

```
2 - Apache Proxy Configuration
3 - DCE Configuration
4 - OAMP Application Configuration
5 - CORBA Configuration
6 - IP Configuration
7 - DNS Configuration
8 - Syslog Configuration
9 - Database Configuration
10 - NFS Configuration
11 - Bootp Configuration
12 - Restricted Shell Configuration
13 - Succession Element Configuration
14 - chg_tz (Change Timezone)
15 - login_session_timeout (Login Session
Timeout Configuration)
16 - snmp_poller (SNMP Poller Configuration)
 X - exit
select -
```

4 Enter the number next to the "Syslog Configuration" option in the menu.

Example response

```
Syslog Configuration
 1 - list_syslog (List a system's syslog
configuration)
 2 - add_syslog (Add a syslog configuration
entry)
 3 - del_syslog (Remove a syslog configuration
entry)
 4 - route_syslog_on (Route syslog to remote
host)
 5 - route_syslog_off (Turn off syslog
re-direction to a remote host)
 X - exit
select - 4
```

5 Enter the number next to the "route_syslog_off" option.

Example response

```
=== Executing "route_syslog_off"
Available facilities are:
local1.notice
local7.notice
Please enter the facility to be routed:
local7.notice
Facility: local7.notice
Enter IP address:
```

6 Enter the IP address to which the syslog logs feed must be removed. For example, if "191.142.106.26" is provided.

Example response

```
Enter IP address:191.142.106.26
191.142.106.26 is alive
=== "route_syslog_on" completed successfully
```

7 Enter "X" and press the Enter key to exit the Command Line Interface.

Viewing SYSLOG Customerlog

The SYSLOG fault feeds contains three types of logs: Customerlog, Audit log, and Security log. The Customerlog can be configured on the Succession platform using the Command Line interface. This section describes the procedure to view the Customerlog SYSLOG fault feeds.

To view the Customerlog SYSLOG in the Integrated EMS server, follow these steps:

At Integrated EMS workstation

1 Connect to the host in which the Integrated EMS server is running using telnet.

2 Type the following command and press the Enter key to change the directory to /var/log.

```
cd /var/log
```

3 Type the following command (for example) and press the Enter key to view the customerlogs.

```
tail -f iemsCustomerlog
```

Note: The customerlogs are stored in the /var/log directory of the system on which the Integrated EMS Server is running. The log is written to file "iemsCustomerlog", moved and rotated through same file name with extension name ranging from ".0" to ".7" as these log files grow and recycled after 7 days based on option set using the CLI tool. The current log is always written to the "iemsCustomerlog" file.

Configuring NTSTD northbound fault feeds

The Integrated EMS aggregates the event streams received from the various EMSs, NEs, applications, and platforms that it manages. It normalizes the events received from these streams and forwards the events over its northbound interfaces (such as SCC2, NTSTD, SNMP, and SYSLOG). Clients who wish to monitor the Integrated EMS NTSTD event stream must have their host IP address configured through the NTSTD host configuration interface. This section describes how to configure the NTSTD host. NTSTD northbound fault feed contains logs for all events, that is, fault and regular information.

Adding NTSTD fault feed hosts

To add the NTSTD northbound fault feed, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Launch the Runtime Administration window using the **Tools-->Runtime Administration** menu command.
3. Select the **NTSTD** node under the OSS Config tree.

   The NTSTD Host Configuration GUI is displayed in the right-side frame.
4. Enter the IP address of the host (to which the northbound fault feeds need to be forwarded) in the **Manager Host** field.
5. Enter the office identifier of the host in the **Office Identifier** field.
6. Click the **Add** button to add the details to the list of northbound host.
7. Click the **Apply** button to save the settings.

   Note: The Apply button must be selected after adding the host configuration details to the list. Otherwise, the added host configuration details are not saved.
8. Click the exit tool button to close the window.

Modifying NTSTD fault feed hosts

To modify the existing NTSTD host in the NTSTD Host

Configuration, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Launch the Runtime Administration window using the **Tools-->Runtime Administration** menu command.
3. Select the **NTSTD** node under OSS Config tree.

   The NTSTD Host Configuration GUI is displayed in the right-side frame.
4. Select the row from the table for which you want to modify.
5. Modify the IP address of the host in the **Manager Host** field.
6. Modify the office identifier of the host in the **Office Identifier** field.
7. Click the **Modify** button to add the details to the list of northbound host.
8. Click the **Apply** button to save the settings.

   Note: The Apply button must be selected after adding the host configuration details to the list. Otherwise, the added host configuration details are not saved.
9. Click the exit tool button to close the window.

Removing NTSTD fault feed hosts

To remove the NTSTD Fault Feed Host, follow the steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the required row with NTSTD fault feed host from the table.
3. Click the **Remove** button to remove the IP address.
4. Click the **Apply** button to save the settings.

Viewing the NTSTD logs

The NTSTD logs in the Integrated EMS Server are viewed with telnet session (with port 8555) to the host in which Integrated EMS Server is running. Before viewing the NTSTD logs, the host IP address from

which you are trying to view the logs must be added to the NTSTD Configuration GUI as specified in the "Adding NTSTD fault feed hosts". To view the NTSTD logs in the Integrated EMS Server running in host named **succession-sol1** (for example), follow these steps:

At the Integrated EMS workstation

1 Connect to the host on which Integrated EMS server is running using telnet.

2 Enter the following command in the command prompt:

```
telnet succession-sol1 8555
```

Configuring the northbound fault filter

Integrated EMS normalizes the events received from various streams and forwards the events over its northbound interfaces (such as NTSTD, SNMP, SCC2, and Customerlog). The events to each northbound interface can be filtered based on the given criteria. This section describes the procedure to add, modify and remove the northbound fault filter.

Launching the Northbound Filter Configuration GUI

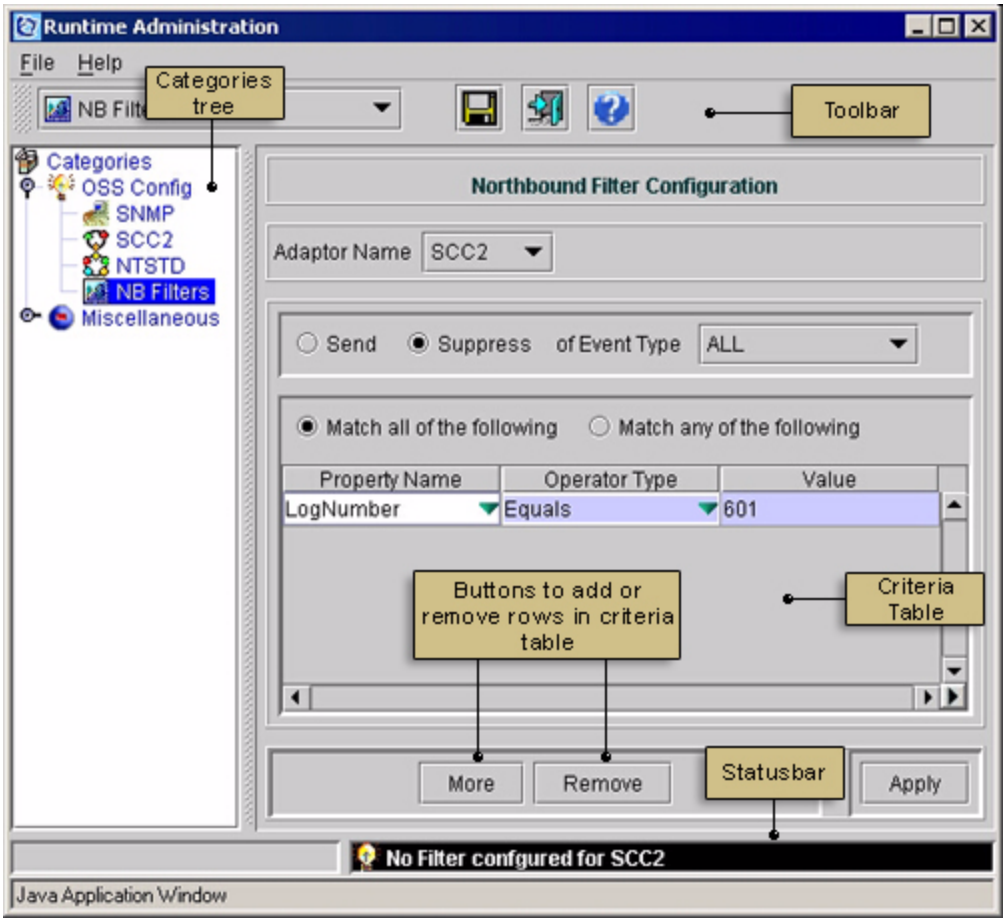
To launch the Northbound Filter Configuration GUI, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Launch the Runtime Administration window using the **Tools-->Runtime Administration** menu command.
3. Select the **NB Filters** node under the OSS Config tree.

   The Northbound Filter Configuration GUI is displayed in the right-side frame as in the following figure.

   Close the dialog using the close tool button to return to Integrated EMS Client.



Adding a northbound fault filter

To add the criteria for the Northbound Fault Filter, follow these steps:

In the Northbound Filter Configuration GUI

1 Select the adaptor name from the **Adaptor Name** list box for which the Northbound filter has to be configured.

2 Select the **Send** option to send the events to northbound based on criteria in the Criteria table.

OR

Select the **Suppress** option to suppress the events being sent to northbound based on criteria in the Criteria table.

3 Select the type of events from the **Event Type** list box, which needs to satisfy the criteria in the Criteria table. The description of various options in the **Event Type** list box are listed in the following table.

Description of options in Event Type list box

Event Type	Description
ALL	All the events are sent to northbound based on the criteria given in the Criteria table.
ALARMABLE	The events that are propagated to alarms sent to the northbound stream based on the criteria given in the Criteria table.
NON ALARMABLE	The events that are not propagated to alarms sent to the northbound stream based on the criteria given in the Criteria table.

4 Select the **Match all of the following** option to specify that all the criterion given in the Criteria table must match.

OR

Select the **Match any of the following** option to specify that any one of the criterion given in the Criteria table must match.

5 Click the **More** button to add a row to the Criteria table.

6 Select the property name from the list box in the row of the PropertyName column. For a description of properties, refer to the following table.

Description of event properties

Property Name	Description
LogName	The log name of the event is either present in the event sent by the component or inserted by Integrated EMS.
LogNumber	The log number of the event.
EquipmentIdentifier	The component name or IP address that raised the event.
NEType	The type of object such as Element Manager, platform, EMS or NE.

7 Select the operator type from the list box in the row of the OperatorType column.

8 Enter the value which the criterion must satisfy in the field under the **Value** column and press the Enter key.

9 Repeat the step 5 to step 8 to add more rows to the Criteria table.

10 Click the **Apply** button to save the details.

Note 1: If the **Apply** button is not clicked after adding or updating criteria in the Northbound Configuration GUI, the details are not saved.

Note 2: If any other node is selected in the Runtime Administration window before clicking the **Apply** button, a dialog opens with the message "You have made some changes. Would you like to apply the changes to the Server". Click the **Yes** button to save the changes.

Note: The above procedure can be repeated for each of the northbound event stream types such as SCC2, NTSTD, SNMP and Custlog. All the clients connecting or monitoring the Integrated EMS northbound events over a particular event stream (For example SCC2) share the common event stream type filter type definitions.

Modifying a northbound fault filter

To modify the existing Northbound Fault Filter criteria, follow these steps:

In the Northbound Filter Configuration GUI

1 Select the adaptor name from the **Adaptor Name** list box for which the Northbound filter has to be configured.

2 Select the **Send** option to send the events to northbound based on criteria in the Criteria table.

OR

Select the **Suppress** option to suppress the events being sent to northbound based on criteria in the Criteria table.

3 Select the type of events from the **Event Type** list box, which needs to satisfy the criteria in the Criteria table. For description of various options in the **Event Type** list box, refer to the Description of options in Event Type list box table.

4 Select the **Match all of the following** option to specify that all the criterion given in the Criteria table must match.

OR

Select the **Match any of the following** option to specify that any one of the criterion given in the Criteria table must match.

5 In the existing rows in the Criteria table, modify the property name from the list box in the row of the PropertyName column. For description of properties, refer to the Description of event properties table.

6 Modify the operator type from the list box in the row of the OperatorType column.

7 Modify the value which the criterion must satisfy in the field under the **Value** column and press the Enter key.

8 Click the **Apply** button to save the details.

Note 1: If the **Apply** button is not clicked after adding or updating criteria in the Northbound Configuration GUI, the details are not saved.

Note 2: If any other node is selected in the Runtime Administration window before clicking the **Apply** button, a dialog opens with the message "You have made some changes. Would you like to apply the changes to the Server". Click the **Yes** button to save the changes.

Note: The above procedure can be repeated for each of the northbound event stream types such as SCC2, NTSTD, SNMP and Custlog. All the clients connecting or monitoring the Integrated EMS northbound events over a particular event stream (For example SCC2) share the common event stream type filter type definitions.

Removing a northbound fault filter

To remove the existing Northbound Fault Filter criteria, follow these steps:

In the Northbound Filter Configuration GUI

1 Select the adaptor name from the **Adaptor Name** list box for which the Northbound filter has to be configured.

2 Select the required row which must be removed.

3 Click the **Remove** button.

The selected row is removed from Criteria table.

4 Click the **Apply** button to save the details.

Note 1: If the **Apply** button is not clicked after adding or updating criteria in the Northbound Configuration GUI, the details are not saved.

Note 2: If any other node is selected in the Runtime Administration window before clicking the **Apply** button, a dialog opens with the message "You have made some changes. Would you like to apply the changes to the Server". Click the **Yes** button to save the changes.

Note: The above procedure can be repeated for each of the northbound event stream types such as SCC2, NTSTD, SNMP and Custlog. All the clients connecting or monitoring the Integrated EMS northbound events over a particular event stream (For example SCC2) share the common event stream type filter type definitions.

Working with alarms

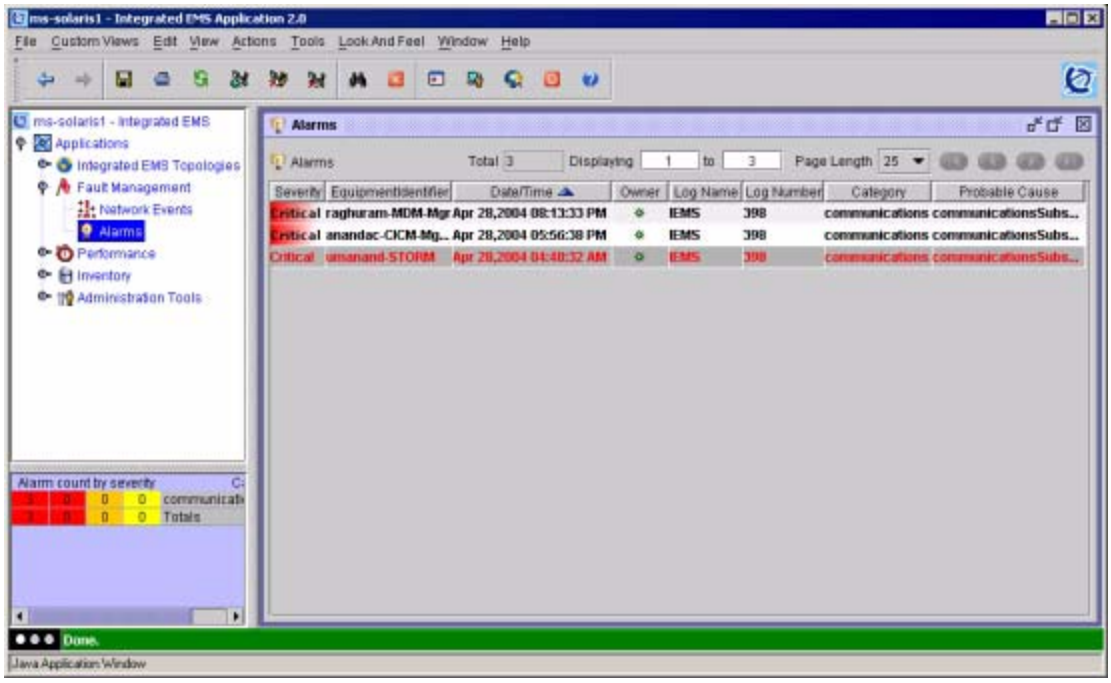
The Integrated EMS alarm browser provides a consolidated real-time view of the events that have occurred in a CS 2000 central office. It provides a tool to view and page through the alarms from the Nortel Networks EMs, NEs, platforms, and applications in a common graphical interface. Alarms are generated when a fault is detected in a network device. The devices forward these alarms to the Integrated EMS. The alarms have one of the following severities:

- Critical
- Major
- Minor
- Warning

The significance of the color (background color of rows in Alarms panel) for each severity levels is listed in the following table.

Color	Severity Level
	Critical
	Major
	Minor
	Warning

The Alarms browser provides a wide range of features to manage and view alarms in a centralized location. To access the Alarms browser, select the Alarms panel (under the Fault Management node) in the Integrated EMS tree.



This section includes following sub-sections:

- Navigating the alarms database: The Integrated EMS Alarm browser provides user interfaces to navigate through the active alarm list. This sub-section describes these user interfaces.
- Searching for alarms: This sub-section describes how to search for an alarm or set of alarms from the Integrated EMS alarm database.
- Creating a custom view for alarms: This sub-section describes the details of creating and modifying a custom alarm view.
- Viewing alarm details: This sub-section describes the Integrated EMS Alarm Details graphical interface.
- Using operations in the Alarms database: The operations that are associated with alarm, such as saving an alarm and printing alarms are explained in this sub-section.
- Using the Alarm Count panel: The Alarm Count Panel shows the number of alarms, severity and their associated categories. This sub-section provides details for the Alarm Count Panel.

Viewing alarm details

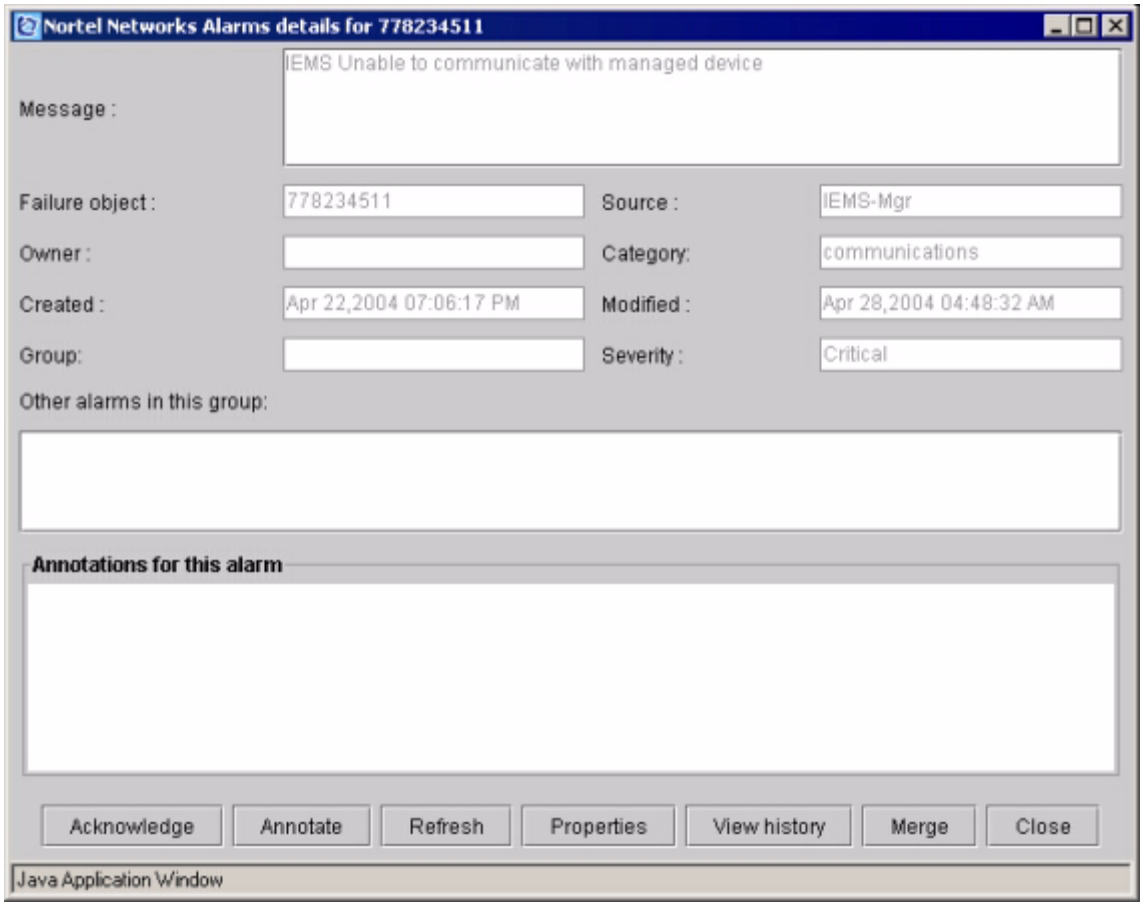
You can view the full details of any alarm by double-clicking it in the Alarms panel. Alternatively, you can select an alarm from the Alarm Viewer, then select the Details option in the View menu. On selecting an alarm in the Alarms table, the corresponding row turns to gray color. The Alarm details window shows the other failures in the same group, the history of the failure and user notes.

To launch the Alarm details window for an alarm, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Alarms** panel under the **Fault Management** node in the Integrated EMS tree.
3. Double-click the required alarm for which details are required.

   The **Alarm details** window opens as shown in the following figure.



The following table describes the properties displayed in the Alarm details window.

Description of properties in Alarm Details window

Property	Description
Message	Important additional information about the alarm.
Failure object	The specific entity which has caused the alarm (in the source specified by the Source field of the alarm).
Source	The source of the alarm.
Owner	The user name of the user who has acknowledged the corresponding alarm is displayed in this field. If it is not acknowledged by any of the users, this field is blank

Description of properties in Alarm Details window

Property	Description
Category	Displays the category of alarm. The alarm category can be one of the following: • communications • qualityOfService • processionError • equipment • environmental • other
Created	The date and time when the alarm was first created.
Modified	The date and time when the alarm was last modified.
Severity	The severity of the alarm.
Acknowledge or Unacknowledge	The owner of the alarm can acknowledge the alarms using the Acknowledge button. For details on this option, refer to Acknowledging or unacknowledging alarms of Using operations in the Alarms database.
Annotate	Notes can be added to the alarm which helps to resolve the problem. For details on this option, refer to Annotating alarms of Using operations in the Alarms database.
Refresh	The details of the alarms can be refreshed using the Refresh button.
Properties	The Properties button opens a window containing the various user properties specified for the alarm. This window is non-editable and is for information purposes only.
View history	The View history button provides information on the severity of alarms added, updated, or deleted. Integrated EMS automatically updates, clears, and deletes alarm history.
Merge	The Merge button allows the simultaneous viewing of both alarm annotations and alarm history.

Clearing alarms raised by managed objects

Fault messages from objects in networks are received by Integrated EMS and displayed in the Network Events panel. The events are propagated to alarms in the Integrated EMS which are displayed in the Alarms panel. The alarms in the Alarms panel have various severities (displayed in Severity column), such as Critical, Major, Minor, Warning, Info, and Clear. This section describes the procedure to clear alarms.

To clear an alarm in the Integrated EMS, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Alarms** panel under the Fault Management node in the Integrated EMS tree.
3. Select a required alarm row from the **Alarms** table on the right-hand side panel.
4. Select the **View-->Clear** menu command to change the severity of selected alarm to clear.

   Once the alarm severity is changed to clear, the corresponding alarm row is removed from the Alarms panel.

   Note: If an alarm is cleared, Integrated EMS changes the severity of the alarm to clear and generates a event (with severity "Info") and adds it to the Events database.

Resynchronizing active alarms

Integrated EMS has the capability to synchronize the alarms in the Integrated EMS database with that of notifications in corresponding managed objects (element managers or NEs). Integrated EMS resynchronize the alarms in the following stages:

- When a managed object supporting alarms resync is added in Integrated EMS.
- When Integrated EMS Server startup.
- When Integrated EMS regains communication with managed object supporting alarm resync.
- When there is missed notifications in Integrated EMS. This option is limited for the managed objects which sends sequence number with its notifications.

In addition to the above you can also manually resynchronize the alarms. The following are the managed objects for which the resynchronize of alarms are supported:

- element managers
  - APS Manager
  - MCS 5200 Manager
  - GWC Manager
  - MG 9000 Manager
  - Preside Multi-Service Data Manager
  - UAS Manager
  - CICM Manager
  - Core Element Manager (CEM)
- NEs
  - Universal Signaling Point
  - STORM
  - CICM
  - Session Server
  - MAS

Note: When the alarms are resynchronized for an Element Manager, the alarms of devices which are managed by the

corresponding Element Manager are resynchronized automatically.

The alarms can be resynchronized manually using one of the following GUIs:

- Topology
- Inventory

Resynchronizing alarms in the Topology GUI

To resynchronize the alarms for an object in the Integrated EMS Client, follow these steps:

At the Integrated EMS workstation

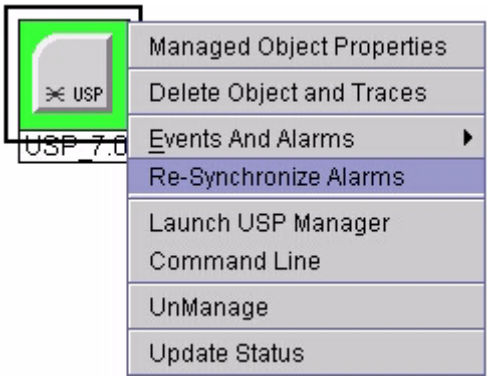
1 Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.

Note: The managed objects listed above that have alarms (in the Integrated EMS database) in sync with the managed objects do not require alarm resync. Hence those object map symbols do not have the **Resynchronize Alarms** menu item in the popup menu for re synchronization.

2 Select the required panel (Network Elements or Element Managers) under the Integrated EMS Topologies node in the Integrated EMS tree.

3 Select the required EMS/NE map symbol in the selected topology panel for which resynchronizing alarms is required.

4 Right-click the map symbol and select the **Resynchronize Alarms** menu item from the popup menu (refer to the following figure) to resynchronize the alarms.



OR

Select the **<Object-specific menu>-->Resynchronize Alarms** command, where the <Object-specific menu> menu indicates the dynamic menu for the selected EMS/NE in the topology.

Resynchronizing alarms in the Inventory GUI

To resynchronize the alarms for an object in the Integrated EMS, follow these steps:

At the Integrated EMS workstation

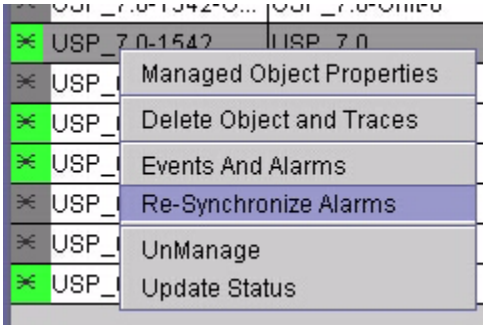
1 Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.

Note: The managed objects (listed above) that have alarms (in the Integrated EMS database) in sync with the managed objects do not require alarm resync. Hence those object map symbols do not have the **Resynchronize Alarms** menu item in the popup menu for re synchronization.

2 Select 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 the Integrated EMS Client.

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 Alarms** menu item (refer to the following figure) to resynchronize the alarms



OR

Select the **<Object-specific menu>-->Resynchronize Alarms** menu command, where **<Object-specific menu>** indicates the dynamic menu for the selected EMS/NE row in the Inventory table.

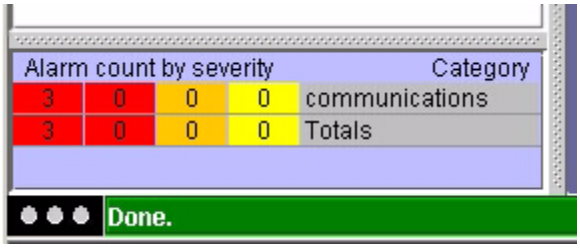
Using the Alarm Count panel

The Alarm Count panel provides a means of summarizing the alarms generated by the Integrated EMS. The summary gives the number of alarms that have been generated under various categories and severity levels.

To navigate to the Alarms panel, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Alarms Count** panel, which is below the Integrated EMS tree.



The Alarm Count panel displays the count of alarm as a table. Each row corresponds to a specific category of alarms. Thus, the number of rows corresponds to the number of categories that are configured for viewing, plus a Totals row at the bottom. The number of columns corresponds to the number of severity levels configured for viewing (Critical, Major, Minor or Warning, the last column that shows the category name). The system counts the alarms by severity. When a new alarm is generated, the count is automatically incremented under the appropriate severity column. The Totals row displays the column (severity) totals for alarms of all categories.

For example, the above figure gives the following information:

First row

- 43 alarms generated in the category Topology, of which
  - 13 alarms have the severity Major
  - 30 alarms have the severity Clear

Last row

- 43 alarms generated in all the categories, of which
  - 13 alarms have the severity Major
  - 30 alarms have the severity Clear

Viewing alarm counts of selected categories: The alarms fall into various categories, but a specific user is interested only in alarms of selected categories. For example, the user might be interested in the alarms in categories ABC and XYZ:

- First row corresponding to the category ABC
- Second row corresponding to the category XYZ
- Third row corresponding to the total of these categories
- Fourth (last) row corresponding to the total of all categories

Viewing alarms of specific severity: To display all the alarms with a particular severity, click on the count displayed for that severity. For example, if you want to see only the Critical alarms, click on the count in the first column.

Viewing alarms of specific category: Click on the category name to displays all alarms under that particular category. For example, if you want to see only the alarms of topology category, click on "Category".

Viewing alarms of specific severity and category: To see all the alarms with a particular severity in a particular category, click on the intersection of the required severity column and category row. For example, to view the alarms with severity Major and belonging to the category Topology, click on the count at the intersection of the Major column and Topology row.

Navigating the alarms database

The Alarms database is navigated with the help of various functions, which provide a simple, sequential, and understandable view of the collected data. The functions include navigation tools such as navigator buttons and column reordering. In alarms database, severity of the alarms can be viewed and data can be sorted based on criteria.

To locate the navigation toolbar, follow these steps:

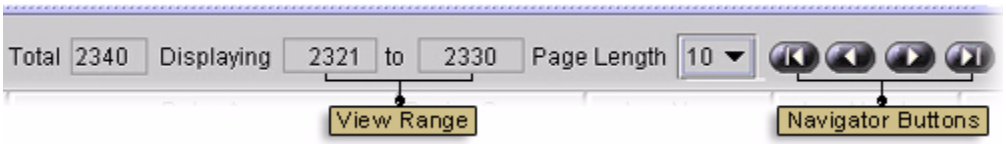
At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Alarms** panel in the Integrated EMS tree.

   The navigation toolbar is at the top part of the **Alarms** panel.

The following sections list the various ways to navigate the Alarms database using the navigation toolbar facilities.

View range: The range of rows that are displayed in the table. It is placed on top of the Alarms window. The user can use the default page lengths available in the combo box.



Navigator buttons: The following table describes the four Navigator Buttons.

Description of buttons in the Navigation bar

Tool button	Icon	Description
First		This button is used to view the first page of the panel that displays the first set of alarms retrieved from the database.
Previous		This button is used to view the previously viewed page of the panel that displays the set of alarms previous to the currently viewed alarms.

Description of buttons in the Navigation bar

Tool button	Icon	Description
Next		This button is used to view the next page of the panel that displays the next set of alarms to the currently viewed alarms.
Last		This button is used to view the last page of the panel that displays the last set of alarms retrieved from the database.

Using sort indicators

The alarms data are sorted based on the column type. The details can be displayed in ascending or descending order, as indicated by an arrow against the column header.

Server-side sorting

Server-side sorting means the sorting of all the rows present in the Alarms database and displaying the first set of rows in the **Alarms** panel. You can carry out this type of sort by clicking on the column header. Repeated clicks on the same column header sort the data in ascending and descending order alternately. The sort indicators for server-side sorting are given in the following table.

Sort Indicator	Purpose
	For server-side sort in ascending order.
	For server-side sort in descending order.

Client-side sorting

Client-side sorting means the sorting of all the rows available in the **Alarms** panel of Integrated EMS Client and the displaying the first set of rows in the **Alarms** panel. This type of sorting is done by clicking on the column header while pressing the Control key (Ctrl). Repeated

clicks on the same column header sort the rows in ascending and descending order, alternately.

Sort Indicator	Purpose
	For client-side sort in ascending order.
	
	For client-side sort in descending order.
	

Both server-side and client-side sorting can be done for one column as required. These sort methods are indicated by a combination of the above indicators.

Reordering columns

The columns are reordered by dragging a column header and moving it to the required place in the table. This facility is useful for comparing the contents of two columns of data.

Searching for alarms

This section describes how to search for one or more alarms in the Alarms database. The search is performed on the entire database and is not restricted to the displayed page alone. The search can be based on various criteria, for example, a particular property or a group of alarms.

To launch the Search dialog, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Alarms** panel under **Fault Management** node in the Integrated EMS tree.
3. Select the **Edit-->Search** menu command to launch the **Search** dialog.

Alternatively, you can invoke the Search dialog from the toolbar using the **Find** button.

You can choose whether the search must satisfy any of the search criteria or all the criteria. In the Search dialog, select the option Match any of the following or Match all of the following.

You can specify the search to be on one or more criteria using the More and Fewer buttons. More allows you to add criteria, and Fewer allows you to delete them. These buttons cause the system to display a window containing three options. The first option lists the existing

column headers in the Alarms table. The second option lists two sets of criteria:

- Normal Criteria
  - starts with
  - doesn't start with
  - ends with
  - doesn't end with
  - contains
  - doesn't contain
  - equals
  - not equals
- Date / Time criteria
  - is before
  - is after
  - equals
  - not equals

The third option is a date/time field for entering specific values. This data must be entered in the order month, day, year, hour, minute, second, and AM/PM which you can select using the up and down arrows.

Using operations in the Alarms database

This section describes other operations that are associated with alarms:

- Acknowledging or unacknowledging alarms
- Annotating alarms
- Grouping alarms
- Saving alarms
- Viewing history
- Printing alarms
- Deleting alarms
- Viewing related events

To navigate to the Alarms panel, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Alarms** panel under **Fault Management** node in the Integrated EMS tree.

Acknowledging or unacknowledging alarms

After a fault has occurred, resources can be allocated to handle and resolve it. Acknowledging an alarm helps in allocating a particular alarm, that is, the device fault, to a work group or a user. Work groups can self-assign problems using the **View-->Ack/UnAck** menu command. This ensures that all problems are picked up and work is not duplicated.

It is also possible to unacknowledge an alarm, which has already been assigned to a user or work group, and acknowledged. Users can unacknowledge an alarm using the Acknowledge/UnAcknowledge button at the bottom of the Alarm details window. The system records an alarm annotation entry against the name of the user who unacknowledged it.

The alarms can be acknowledged or unacknowledged using the Acknowledge or Unacknowledge toggle button in Alarm Details panel respectively. For details, refer to Acknowledge or Unacknowledge of Viewing alarm details.

Annotating alarms

Annotate button in Alarm Details can be used to add notes to an alarm for future reference. For example, the solution for a problem resolved by you can be entered by using the annotate option. This enables other users to solve the same problem with less effort, by just reading the annotation. For example, when many people are working on an alarm on shift basis, it is possible to annotate the user observations/findings about that particular alarm. This helps the next person in line to analyze the problem further with ease.

Grouping alarms

For ease of administration, the alarms can be grouped based on various criteria. For example, you can group all the alarms pertaining to a single device. The system represents the group as a single item and references it by its group name. For details, refer to the GroupViewMode of Setting the search criteria for Custom view of alarms.

Note: The Grouping alarms feature does not function in current release of Integrated EMS.

Saving alarms

To save the current range of alarm data displayed, together with the current custom view, in the Actions menu select Save To File. Alternatively, you can save alarm data using the Save button in the toolbar. The system saves the alarm data in the same location as the Integrated EMS Server. The file is saved in the directory <IEMS Home>/state where <IEMS Home> is the location in which the Integrated EMS Server is installed. The data is saved in text format with each values in the each column separated by ":" (colon). For example, the saved equivalent of a row in the Alarms table might be as follows:

```
Critical: IEMS: 398:null: communications: Jul
25,2003 04:06:31 AM: null
```

Viewing history

The history of the alarms gives a complete record of the status of the alarms, that is, when they are added, updated, or deleted. For example, when a Critical alarm is generated, the Alarm panel gives the current status of the alarm. When the problem is fixed, the system updates the status from Critical to Clear. The View History button of Alarm Details window allows you to view the status of the cleared object from the first alarm to the last. To invoke the alarm details window, refer to Acknowledge or Unacknowledge of Viewing alarm details. The details include the time of occurrence, the time stamp of alarm generation, and

the severity change.You can merge the history and annotations together using the Merge button.

Printing alarms

To print the current range of alarm data displayed, together with the current custom view, in the Actions menu select Print. Alternatively, you can use the Print button in the toolbar. The Integrated EMS Server must have a configured printer to execute this action. The system sends the output to the default printer.

Deleting alarms

The single or multiple rows in the Alarms table can be deleted or removed from Integrated EMS. Select the required row(s), then in the Edit menu select Delete. Before deleting the selected rows, the system prompts you for confirmation.

Viewing related events

You can view the related events for a particular alarm. Select the required alarm(s), then in the View menu select Events. The system displays all the events relating to the selected alarm.

Creating a custom view for alarms

A custom view is a subset of data satisfying given criteria.

Custom view creation involves the following steps:

- defining the search criteria for filtering the data.
- specifying how to view the filtered data.

Custom views have the following features:

- can display alarms according to specific criteria
- dynamic data updates
- use of the same custom view name at different levels
- customizable columns (properties to view)
- editable column and sort order
- custom view properties can be saved
- custom views can be modified or renamed

Using various features in custom view

To use the custom view features, select the Custom View menu or toolbar buttons. The following table describes the five custom view commands.

Features in Custom Views for alarms

Tool button in Toolbar	Menu Bar Option	Shortcut	Description
	Custom Views--> Add Custom View	Ctrl+N	Adds a new custom view with specific criteria.
	Custom Views--> Remove Custom View	Ctrl+D	Removes a custom view. The parent custom view (Alarms) cannot be removed.

Features in Custom Views for alarms

Tool button in Toolbar	Menu Bar Option	Shortcut	Description
	Custom Views--> Modify Custom View	Ctrl+M	Modifies a custom view.
	Custom Views--> Save Custom View State	Ctrl+S	Saves the current state of the custom view (properties such as column order, sort order).
	Custom Views--> Rename Custom View	Alt+F2	Renames a custom view.

Adding or modifying custom view

The Add and Modify options cause the system to display a Custom View property sheet. You can customize the custom view properties in the Tree node properties tab by completing the form with the required criteria. When you submit the form, the system creates the new or modified custom view. The tree on the left side of the main window shows the changes.

Removing custom view

The Remove option removes the currently selected custom view. If this is a parent custom view with one or more dependent child custom views, the complete set of parent and child custom views are removed. The main parent custom view (default - Alarms) cannot be removed. When you select the Remove option, the system prompts you for confirmation before carrying out the action

Saving custom view state

The Save Custom View State option saves the current state of the custom view, including properties such as the column order, the sorted alarms, and the first and last viewed alarms.

Renaming custom view

The Rename option renames the current custom view. While renaming the custom view, if you change your mind and want to retain the old name, press the Esc key before completing the rename operation.

Setting the search criteria for Custom view of alarms

The search criteria to create custom view for alarms is set using the Specify alarm filter criteria form and Tree Node properties of Specify alarm criteria window. This section explains the procedure to specify the search criteria in the Specify alarm filter criteria form and Tree Node Properties form.

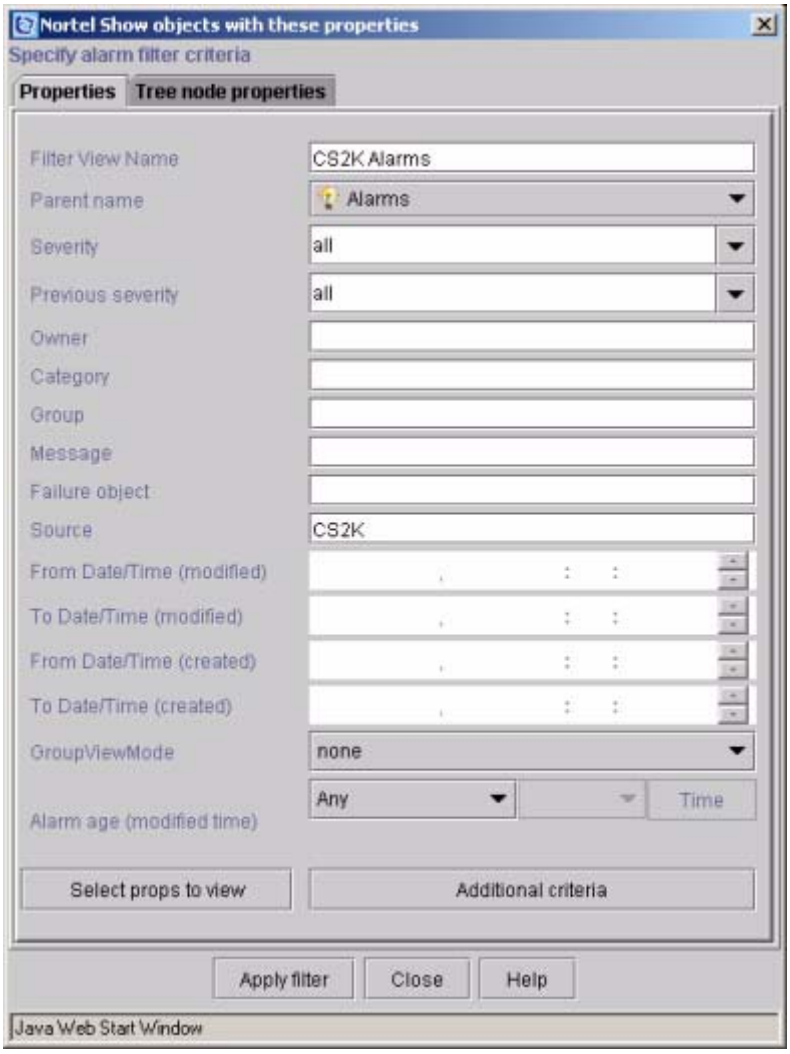
Defining the search criteria

To invoke the Specify alarm filter criteria window, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Alarms** node under **Fault Management** node in the Integrated EMS tree.
3. Right-click the **Alarms** node and select the **Custom Views-->Add Custom View** menu command.

   The following figure shows the alarm filter criteria properties tab.



The following table lists the fields and explains how to complete the form.

Description of properties in Custom View GUI for alarms

Property	Description
Filter Value Name	Type the name of the custom view.
Parent name	In the drop-down list, select the object in the navigation tree, under which this custom view is to be added. The default is Alarms.

Description of properties in Custom View GUI for alarms

Property	Description
Severity	In the drop-down list, select the severity of the alarm to be included in the view. Multiple severities can be assigned; separate the severities with commas.
Previous Severity	In the drop-down list, select the previous severity of the alarms to be viewed. For example, if you want to view alarms that were previously minor and then changed to critical, select Minor in this field. Multiple severities can be assigned; separate the severities with commas.
Owner	Type the name of the owner with whom the alarm is associated. To create a custom view for alarms that has no owner, type "NULL" in this field.
Category	Type the category of the alarms in this field. The various categories of alarms are: • communications • qualityOfService • processingError • equipment • environmental • others
Group	Type the name by which the alarms are grouped.
Message	Type any important additional information regarding the alarm. If you want to view the alarms with a particular message, type all or part of the message in this field.
Failure Object	Type the specific entity in the source of the alarm that is primarily responsible for the occurrence of this alarm.
Source	Type the source of the alarm.
From Date/Time (modified)	Type the start date and/or time for selecting modified alarms.Note: All Date/Time data must be entered in the order month, day, year, hour, minute, second, and AM/PM which you can select using the up and down arrows.
To Date/Time (created)	Type the end date and/or time for selecting modified alarms.

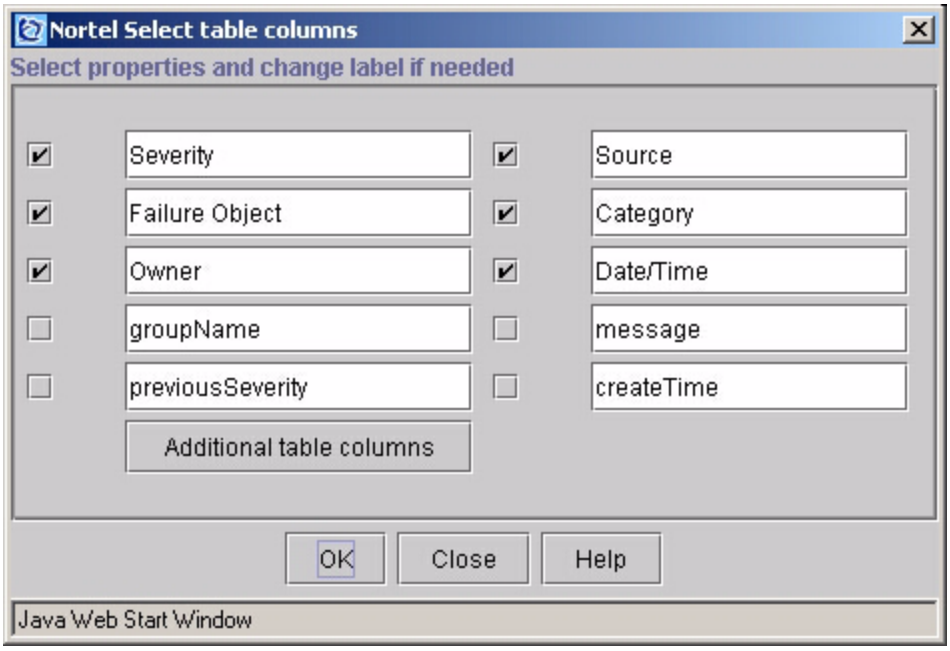
Description of properties in Custom View GUI for alarms

Property	Description
GroupViewMode	In the drop-down list, select the method for grouping the alarms: • max - the alarms of maximum severity are grouped and displayed at the top of the list. • latest - the newest alarms are grouped and displayed at the top of the list. • none - the alarms are not grouped ***Note:*** The Grouping alarms feature does not function in current release of Integrated EMS.
Alarms Age (modified time)	The age of an alarm denotes the time lapsed since the last modification of the alarm in the Integrated EMS Server. Use the various fields to specify criteria based on the age of the alarm. The age can be specified in minutes, hours, days, today, yesterday, or all these criteria together.

Note: If all the above parameters (except Filter View Name) are left blank, the system sets them to the default value "all". For Date/Time properties, the default value is the current date and time.

Specifying how to view the filtered data

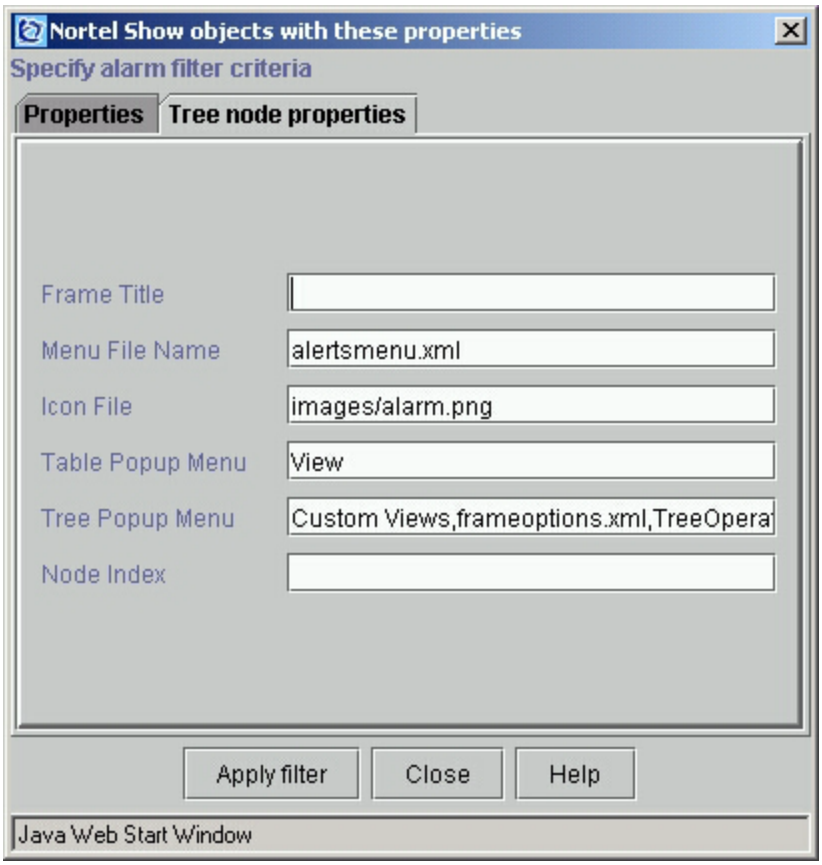
Using Select properties to view: The **Select Props To View** button allows the user to specify how to view the filtered data. This button opens a window as shown in the following figure. The values displayed in the window are the default values for viewing the filtered data.



Additional criteria: The Additional criteria button in the custom view properties form allows you to specify additional criteria for viewing the filtered data. Click this button to launch the Criteria dialog.

Setting the Tree node properties

The Tree node properties tab of the Specify alarm filter criteria form allows you to specify how the system displays the custom view node in tree. The following figure shows the Tree node properties window.



The following table lists the fields and explains how to enter the data.

Description of properties in Tree Node Properties tab of Custom View GUI for alarms

Property	Description
Frame Title	The name to be displayed on the title bar of the custom view internal frame. Type the required name.
Menu File Name	The panel-specific menu file name for the Alarms panel. Do not modify this field.
Icon File	The icon required for the custom view. This icon is visible in the tree as well as in the title bar of the internal frame. The icon file must be in PNG format and must be present under <IEMS Home> folder or any of its sub-folders (<IEMS Home> folder is the folder under which Integrated EMS Server is installed). Type the required file name.

Description of properties in Tree Node Properties tab of Custom View GUI for alarms

Property	Description
Table Popup Menu	The file name of the menu used to display a contextual menu for the objects displayed in the Alarms table. Do not modify this field.
Tree Popup Menu	The file name of the menu used to display a contextual menu for the Alarms node in the Integrated EMS tree. Do not modify this field.
Node Index	The position of the custom view in relation to previously added views. If this field is left blank, the system adds the view at the end of the current list of custom views. Type the required value.

Example for creating a custom views for alarms

For details of the properties available for filtering alarms, refer to the "Defining Match Criteria". This section describes the procedure for creating a custom view of the alarms from a CS 2000 device.

To create a custom view for alarms from CS 2000 Core Manager objects (for example), follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Java Web Start Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Select the **Alarms** node under **Fault Management** node in the Integrated EMS tree.
3. Right-click the **Alarms** node and select the **Custom Views-->Add Custom View** menu command.

   The Specify alarm filter criteria window opens, headed Specify alarm filter criteria.
4. Enter the text "CS 2000 Manager Alarms" in **Filter View Name** field.
5. Enter the text "*CS2K-Mgr" in the **Source** field (see note 2).
6. Click the **Select props to view** button.

   The Select table columns window opens.
7. Check the following text boxes with the text (if not checked)
   - Severity
   - Owner
   - Source
   - Category
   - Date/Time
8. Click the **OK** button to apply the changes and click the **Close** button to close the Select table columns window.
9. Click the **Apply filter** button to create a custom view.

   Note 1: You can modify the search criteria for a custom view after the view is created. To modify the search criteria, right-click the custom view. In the Custom Views menu, select Modify Custom View. This opens the Specify alarm filter criteria window.

You can also remove a custom view. Right-click the Custom View. In the Custom Views menu, select Remove Custom View.

Note 2: The wild card "*" used in the Source value "*CS2K-Mgr" causes all the object names ending with "CS2K-Mgr" to be filtered and displayed in the custom view.

To remove a custom view, right-click the custom view and select **Custom Views-->Remove Custom View**.

Working with events in Web Client

The following sections describe the operations available in the Integrated EMS Events page of Web Client in detail.

- Navigating the events database
- Searching for events
- Viewing event details
- Working with the Network Events view
- Saving, printing and viewing related alarms of events

Viewing event details

The event details such as status, equipment identifier, time stamp, device sequence number, log name, log number, and other details can be viewed in the Integrated EMS Web Client. This section describes the procedure to view the details of an event and description of each property displayed in Event Properties page.

To view the event details for an event in the Integrated EMS Web Client, follow these steps:

At Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to Fault Management tab in Web Client.
3. Select **Network Events** node in the Module tree (if not selected).
4. In the Network Events table, click the "i" icon under Status column for the event.

   The properties are listed in the Event Properties page. For description of the properties, refer to the Description of properties in the Event Details dialog table of Viewing event details.

Navigating the events database

Integrated EMS Web Client offers all the options offered by Java Web Start Client to navigate the Network Events database. You can sort, set the view range and navigate using navigator buttons.

To navigate to the Events Database in Web Client, follow these steps:

At Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to the **Fault Management** tab in Web Client.
3. Select the **Network Events** view in the Module tree (if not selected). The events from various managed objects are displayed in the Network Events page in the right-hand side.

Browsing the events

The navigator buttons First, Previous, Next, and Last are located below the module menus. The descriptions of the buttons in the order they are displayed are given in the following table.

Description of buttons in Navigation bar

Tool button	Icon	Description
First		This button is used to view the first page of the panel that displays the first set of events retrieved from the database.
Previous		This button is used to view the previously viewed page of the panel that displays the set of events previous to the currently viewed events.
Next		This button is used to view the next page of the panel that displays the next set of events to the currently viewed events.
Last		This button is used to view the last page of the panel that displays the last set of events retrieved from the database.

Customizing events per page

By default, 50 events are shown per page in the Network Events table. The number of events displayed can be changed by following procedure.

To change the number of events displayed per page in Network Events page, follow these steps:

At the Fault Management tab in Web Client

1. Select the **Network Events** view in the Module tree (if not selected). The events from various managed objects are displayed in the Network Events page in the right-hand side.
2. Choose the required page count from the **entries per page** list box to select the entries per page.

   The corresponding number of events 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.

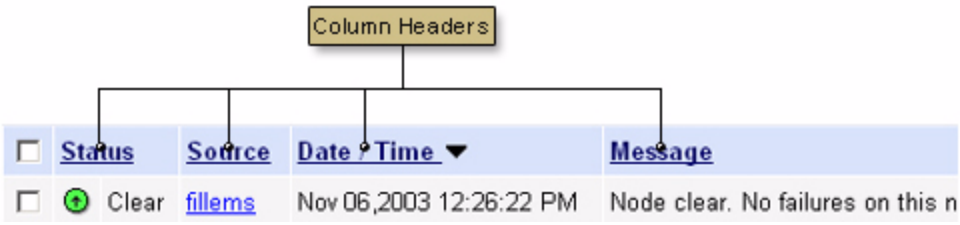
To show or hide the columns in the Network Events table, follow these steps:

At the Fault Management tab in Web Client

1. Select the **Network Events** view in the Module tree (if not selected). The events from various managed objects are displayed in the Network Events page in the right-hand side.
2. Click Customize Columns menu in the module menus area to launch the Customize Columns window.
3. Using the --> and <-- arrow buttons move the columns required to be viewed in Displayed columns list.
4. Click **Apply** to save the settings and close the window.

Sorting events

By default, the events in the Network Events table are displayed in the order of precedence based on the Date or Time and Event ID and in descending order. Events are assigned IDs and these are based on the date and time they are generated. Hence these two properties are interrelated. This order can be changed using the Sorting option.



To sort the events in Network Events table, follow these steps

At the Fault Management tab in Web Client

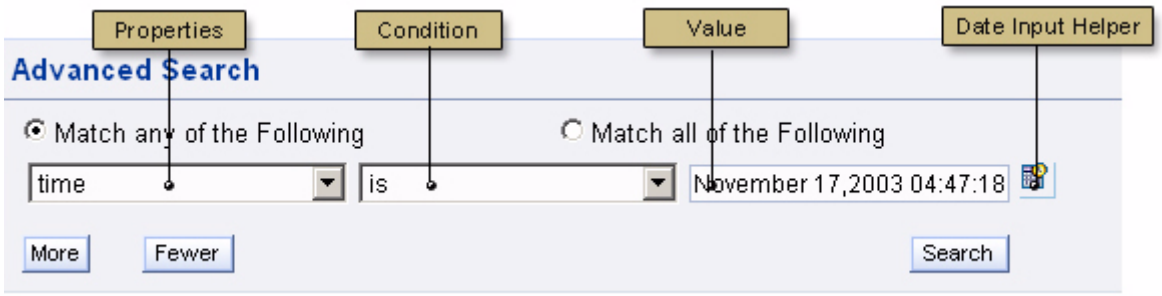
1 Select the **Network Events** view in the Module tree (if not selected).

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 is facing upward, it means that the column is sorted in ascending order. If the arrow is facing downward, it means the column is sorted in descending order.

Example
If you need to sort the events based on its status, click the Status column header. If the arrow is facing upward, the events are sorted based on its status and the default order of precedence is Critical, Major, Minor, Warning, Clear, and info. If the arrow is facing downward, the events are sorted based on descending order of the same column, click the Status column header again.

Searching for events

The search option in Web Client facilitates searching for one or more events. The search operation is performed on the entire database and is not restricted to the displayed view alone. You can search for a required event based on a general condition or a unique criteria. The various fields in the Advanced Search page is labelled in the figure below:



To search events in Events Database of Web Client, follow these steps:

At Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to the **Fault Management** tab in Web Client.
3. Select the **Network Events** view in the Module tree (if not selected). The events from various managed objects are displayed in the Network Events page in the right-hand side.
4. Click the **Search** menu item in the Module Menus area.

   The Advanced Search page is displayed.
5. Select the **Match any of the Following** 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 for your search operation, select Match all of the Following.
6. Select the property based on which you need to perform your search from the Properties list box.
7. Select the condition based on which you need to restrict your search in the Condition field.

8 Enter the exact information you are looking for in the Value field.

Example
If you have selected severity in the Properties list box, then you need to specify the severity value here. For example, critical, major or other severities.

If you have selected property related to date or time, the Date Input Helper option is useful. To use Date Input Helper field, follow these steps:

a Click the **Date Input Helper** button (next to Value field). By default, the current system month, year, date, and time are displayed when the Date Input Helper is launched.

b Select the required month from the **Month** list box. By default, current system month is displayed.

c Select the required year from the **Year** list box. By default, the current system year is displayed.

d Click the required date in the calendar. The calendar is based on the month you select and by default the current system date is highlighted.

e Enter the time in **Time** field and select AM or PM from the adjacent list box. By default, the system time is displayed.

f Click the **Apply** button to return back to the Advanced Search page with the provided date and time details in Date Input Helper.

9 Click the **More** button and repeat steps 3 to 5 to specify additional criteria.

Fewer option button is used to remove the criteria that were last added.

10 Click the **Search** button to beginning the search based on the given criteria.

The events satisfying the configured criteria set are displayed.

Working with the Network Events view

The events in the Network Events page can be numerous and hence difficulty arises in identifying events of your interest. A search can be performed to locate the events you are looking for, but if you are looking for a lot of events 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 events 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, data can be easily filtered and displayed.

To navigate to the Events database in Web Client, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to the **Fault Management** tab in Web Client.
3. Select the **Network Events** view in the Module tree (if not selected).

   The events from various managed objects are displayed in the Network Events page in the right-hand side.

Adding a child view

A child view can be added or created by specifying various criteria and providing a name for the view. The views you create enable you to quickly monitor the managed objects. Multiple views can also be created to display a variety of information.

Example
You can create a new view named "MasterEvents" which shows only events in a particular network. Within this "MasterEvents" view, you can create more views. For example, ME1 can have a different set of criteria, say only critical events in that particular network. Deleting MasterEvents view deletes its child views (ME1, ME2, etc.) as well.

To add a child view for Network Events, follow these steps:

At the Fault Management tab of Web Client

1 Select the **Network Events** view in the Module tree (if not selected).

2 Click the **Add Child View** menu item in the Module Menus area.

The Add Event Child View page is launched.

3 Enter the child view name in the **Child view name field** (mandatory).

4 Enter the details for the following fields. Refer to the "Setting the search criteria for a custom view of events" module for using the fields listed below:

- Severity
- Failure Object
- Message
- Category
- Node
- Network
- Events generated after
- Events generated before
- Event Age

5 Click the **Submit** button to create a child view with the details provided.

A child view is created with the specified name and a view is added under Network Events node in the Web Client tree.

Modifying a child view

A view can be modified to change the criteria that were set or you can rename the view. This section describes the procedure to modify the child view.

To modify a child view under Network Events node, follow these steps:

At the Fault Management tab of Web Client

1 Select the child view node under the **Network Events** node that has to be modified.

2 Click the **Edit View Criteria** menu item in the Module Menus area.

The Edit Event View Criteria page is launched.

3 Modify the child view name in the **Child view name field** (if required).

4 Modify the details for the following fields. Refer to the "Setting the search criteria for a custom view of events" module for using the fields listed below:

- Severity
- Failure Object
- Message
- Category
- Node
- Network
- Events generated after
- Events generated before
- Event Age

5 Click the **Submit** button to modify the child view with the details provided.

Removing a child view

A child view can be removed from the Network Events when it is not required.

To remove a child view under Network Events node, follow these steps:

At the Fault Management tab of Web Client

1 Select the child view node under the **Network Events** node that has to be removed.

2 Click the **Remove View** menu item in the Module Menus area.

A dialog is launched confirming whether you want to remove the child view.

3 Click the **Yes** button to remove the selected child view.

The selected child view is removed.

Saving, printing and viewing related alarms of events

In Web Client, you can save and print events and view alarms related to an event. The save option is used to save the current range of event data displayed in the page. The print option prints the current range of event data displayed in the page. Alarms that are generated from the corresponding events can also be viewed. This section describes the procedure for the following operations:

- Saving events
- Printing events
- Viewing related alarms

To navigate to Events Database in Web Client, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to the **Fault Management** tab in Web Client.
3. Select the **Network Events** view in the Module tree (if not selected).

   The events from various managed objects are displayed in the Network Events page in the right-hand side.

Saving events

To save the events displayed in the Network Events frame as an HTML file in Web client, follow these steps:

At the Fault Management tab of Web Client

1. Select the **Network Events** view in the Module tree (if not selected).
2. Right-click the Network Events node and select the **Open in New Window menu** item to open the Network Events panel in a new browser window.
3. Save the Network Events page (opened in new window) as an HTML file locally using **File-->Save As...** menu command

Printing events

To print the events displayed in the Network Events frame of Web

client, follow these steps:

At the Fault Management tab of Web Client

1 Select the **Network Events** view in the Module tree (if not selected).

Note: You need to have a printer configured in the system where you are performing the print operation.

2 Click the **Print Version** menu item located above the Events List View. A new page is launched with the list of events is displayed.

3 Click the **Print** button in the new page launched to print the events in that page.

Viewing related alarms

Events are converted to alarms based on their significance which are messages that require your attention. From the Events view, you can view the alarm that has been created for an event.

To view the related alarms for the selected events in Web client, follow these steps:

At the Fault Management tab of Web Client

1 Select the **Network Events** view in the Module tree (if not selected).

2 Select the check box of the required events in the Network Events page. To view related alarms for more than one event, select multiple check boxes.

3 Select the **View Alarms** from the **Operations** list box above the column header.

The Alarms page with all the alarms related to those events are displayed and they are displayed in a descending order based on the time of its modification.

Working with alarms in Web Client

Alarms are generated when a failure or fault is detected in the network devices. The generated events are converted to alarms based on their significance. The alarms are simply messages calling for your attention. The following sections explain the procedure to perform various tasks for alarms:

- Searching for alarms
- Navigating the alarms database
- Viewing alarm details
- Working with alarm view
- Using operations in alarms
- Viewing alarm counts

Viewing alarm details

The alarm details such as source, severity, time stamp, message, category, alarm index, and body text can be viewed in the Integrated EMS Web Client. This section describes the procedure to view alarm details.

To view the alarm details in the Integrated EMS Web Client, follow these steps:

At Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Click the **Fault Management** tab in the Web Client.
3. Select the **Alarms** view in the Module tree (if not selected).
4. In the alarms table, click the "i" icon in the Status column for the alarm.

   The properties and their values are listed in the Alarms table. For a description of the properties, refer to the Description of properties in Alarm Details window table of Viewing alarm details.
5. Click the **Annotation & History** tab to view the annotation and history details of alarm (if any).
6. Click the **Related Alarms** tab to view the alarms related to selected alarm.

Navigating the alarms database

You can sort, set view range and navigate alarms using navigator buttons.

To navigate to the Alarms Database in the Web Client, follow these steps:

At Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to Fault Management tab in Web Client.
3. Select the **Alarms** view in the Module tree. The alarms are displayed in the Alarms page in the right-hand side.

Browsing the alarms

The navigator buttons First, Previous, Next, and Last are located below the module menus. The descriptions of the buttons in the order they are displayed are given in the following table.

Description of Buttons in Navigation Bar

Tool button	Icon	Description
First		This button is used to view the first page of the panel that displays the first set of alarms retrieved from the database.
Previous		This button is used to view the previously viewed page of the panel that displays the set of alarms previous to the currently viewed alarms.
Next		This button is used to view the next page of the panel that displays the next set of alarms to the currently viewed alarms.
Last		This button is used to view the last page of the panel that displays the last set of alarms retrieved from the database.

Customizing alarms displayed per page

By default, 25 alarms are shown per page in the Alarms table. You can change the number of alarms displayed using the following procedure:

To change the number alarms displayed per page in the Alarms page, follow these steps:

At the Fault Management tab in Web Client

1. Select the **Alarms** view in the Module tree. The alarms from various managed objects are displayed in the Alarms page in the right-hand side.
2. Choose the required page count from the **entries per page** list box to select the entries per page.

   The corresponding number of alarms is displayed per page.

Customizing the columns displayed

The alarm's properties are displayed as columns in the Alarms page. You can show or hide the columns displayed in the Alarms table.

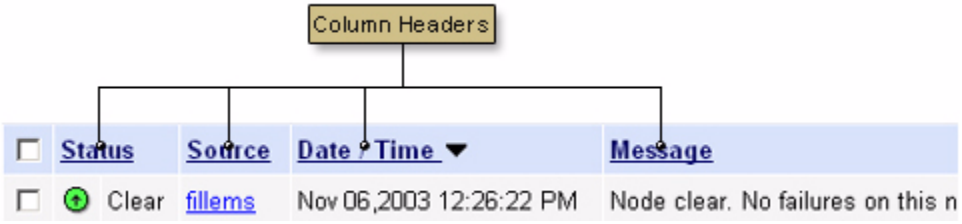
To show or hide the columns in the Alarms table, follow these steps:

At the Fault Management tab in Web Client

1. Select the **Alarms** view in the Module tree (if not selected). The alarms from various managed objects are displayed in the Alarms page in the right-hand side.
2. Click the **Customize Columns** menu item in the module menus area to launch the Customize Columns window.
3. Click the **-->** or **<--** buttons to move the columns required to be viewed in Displayed Columns list.
4. Click the **Apply** button to save the settings and close the window.

Sorting alarms

By default, in the Alarms page, the alarms are displayed in the order of precedence based on time and in descending order. This order can be changed using the Sorting option.



To sort the alarms in the Alarms table, follow these steps

At the Fault Management tab in Web Client

1 Select the **Alarms** view in the Module tree (if not selected).

2 Click the required column header in the table to sort the column in the ascending order. Click the column order again to sort it in descending order. If the arrow is facing upward, it means that the column is sorted in ascending order. If the arrow is facing downward, it means that column is sorted in descending order.

Example
If you need to sort the alarms based on their status, click the **Status** column header. This sorts the alarms based on their status and the default order of precedence is Critical, Major, Minor and Warning. For descending order of the same column, click the Status column header again.

Viewing alarm counts

The Alarm Count Panel is displayed below the Module Tree which enables you to view a summary of all the alarms generated by Integrated EMS. The summary gives the number of alarms that are generated under various categories and severity levels and this panel is automatically refreshed every 30 seconds.

The Alarm Count panel is presented in a tabular format for easy viewing. Each row corresponds to a specific category of alarms. The number of rows corresponds to the number of alarm categories. The last row provides the total number of alarms for each severity level. An alarm can have the following severity levels:

- Critical
- Major
- Minor
- Warning

To navigate to the Alarms Count Panel in the Web Client, follow these steps:

At the Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to the **Fault Management** tab in Web Client.

   The Alarms Count Panel is located below the Module tree.

The alarm count is based on severity. When a new alarm is generated, the count is updated automatically under the appropriate severity column. You can view all the alarms under a specific severity or a specific category.

View all alarms with a specific severity

In the Alarm Count panel, click the count in the Total row that corresponds to the specific severity of the alarms you want to view. For example, if you want to view all the critical alarms, click the total count in the first (red) column.

View all alarms for a specific category

In the Alarm Count panel, click the category name of the alarms you want to view. For example, if you want to view all the alarms in the topology category, click Topology in the Category column.

View all alarms with a specific severity level for a specific category

In the Alarm Count panel, click the count corresponding to the specific severity and category of the alarms you want to view. For example, if you want to view all the critical alarms to the topology category, click the count in the first (red) column and in the Topology row.

Searching for alarms

The Search option in Web Client facilitates searching for one or more alarms. The search operation is performed on the entire database and it is not restricted to the displayed page alone. You can search for a required alarm based on a general condition or a unique criterion.

To navigate to the Alarms Database in the Web Client, follow these steps:

At Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to the **Fault Management** tab in Web Client.
3. Select the **Alarms** view in the Module tree. The alarms are displayed in the Alarms page on the right-hand side.

The procedure to search for alarms is the same as explained in the Searching for events.

Using operations in alarms

You can view annotation and history, view-related events, view-related alarms, print alarms, deleting alarms, clearing alarms and other operations. Refer to the following sections for details on operations such as viewing annotation and history, printing alarms, deleting alarms, and clearing alarms:

- Adding comments to alarms
- Viewing annotations and alarm history
- Viewing related alarms
- Printing alarms
- Saving alarms as and HTML file in Web Client

To navigate to the Alarms Database in the Web Client, follow these steps:

At Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to the Fault Management tab in Web Client.
3. Select the **Alarms** view in the Module tree. The alarms are displayed in the Alarms page in the right-hand side.

Adding comments to alarms

It is important to track any action you have taken to fix an alarm or any new information you have gathered about the alarm. Annotate option can be used to add notes to an alarm for future reference. For example, the solution for a problem resolved by you can be entered by using the Annotate option. This enables other users to solve the same problem with less effort, by just reading the annotation.

To add annotations for an alarm, follow these steps:

At the Fault Management tab of Web Client

1. Select the **Alarms** view in the Module tree. The alarms are displayed in the Alarms page in the right-hand side.
2. Click the equipment identifier of the managed object for which the alarm details are required in the Alarms table.

   The properties and their values are listed in the Alarm Properties page. For description of properties, refer to the Description of

properties in the Event Details dialog table of Viewing event details.

3 Click the **Annotate** menu item in the module menus area to launch the Annotate page in a new window.

4 Enter the required message in the **Message** text area.

5 Click the **Annotate** button to annotate the selected alarm.

Viewing annotations and alarm history

The history of the alarms gives the complete information on the status of the alarms, such as when they are added or updated. For example, when a critical alarm is generated, the **Alarms** view displays the current status of the alarm. If the problem has been fixed, an alarm with clear severity updates the one with critical severity.

To view annotations and history of an alarm, follow these steps:

At the Fault Management tab of Web Client

1 Select the **Alarms** view in the Module tree. The alarms are displayed in the Alarms page in the right-hand side.

2 Click the icon in the **Status** column of the alarm in the Alarms table.

3 Click the **Annotation & History** tab to view the annotation and history details of alarm (if any).

4 Click the **Merge History** item in the Annotation & History page to view the annotations and history together in the order of precedence based on time.

To return to the separate views of annotation and history, click the Annotation & History menu.

Viewing related alarms

The alarms generated for the same managed object can be viewed using this option.

To view the related alarms for an alarm of a managed object in Web Client, follow these steps:

At the Fault Management tab of Web Client

1 Select the **Alarms** view in the Module tree. The alarms are displayed in the Alarms page in the right-hand side.

2 Click the equipment identifier of the managed object for which the alarm details are required in the Alarms table.

3 Click the Related Alarms tab to launch the Related Alarms page.

The alarms are listed in the page, if no alarms are present, the "No Other Failures in this Group" message is displayed.

Printing alarms

To print the alarms in the Web Client, follow these steps:

At the Fault Management tab of Web Client

1. Select the **Alarms** view in the Module tree. The alarms are displayed in the Alarms page in the right-hand side.
2. Click **Print version** menu item in the Module menus area to launch the Alarms page in a new window.

   The printable format of alarms is displayed in this page.
3. Click the **Print** button.

   Your operating system's print options are launched.

   The *Printing Alarms page helps to gather information on all alarms or those of your interest.*

   Example
   The Alarms List View can be customized by adding or removing columns using the Customize Columns option, order the alarms by sorting, or by create new views. Use the print option to get the printable version of the Alarms page.

Saving alarms as and HTML file in Web Client

To save the displayed alarms as an HTML file in Web Client, follow these steps:

1. Refer to "Launching the Integrated EMS Web Client" to launch the Integrated EMS Client.
2. Select the **Alarms** node under **Fault Management** node in the Integrated EMS tree.
3. Right-click the **Alarms** node and select the Open in New Window menu item.

   The **Alarms** frame opens in a new browser window.
4. Save the **Alarms** page as HTML file in the local using **File-->Save As...** menu command.

   The file is saved in the directory <IEMS Home>/state, where <IEMS Home> is the location in which the Integrated EMS Server is installed.

Working with alarm view

The alarms in the Alarms List View can be numerous and hence, it is difficult to identify the data of your interest. You can use the Search option to locate the alarms you are looking for. But if you are looking for many alarms that satisfy a certain set of criteria, then use the Add Child View, Edit View Criteria, and Remove View options. This helps you to retrieve only the alarms you want to view in that custom view, instead of doing a search every time.

A child view that you create is a subset of data that satisfy a given criterion from a larger collection. By creating new views, the data is easily filtered and displayed and sort through large amount of alarms data.

To navigate to the Alarms Database in the Web Client, follow these steps:

At Integrated EMS workstation

1. Refer to "Launching the Integrated EMS Web Client" in Integrated EMS Basics, NN10329-111 to launch the Integrated EMS Client.
2. Switch to the **Fault Management** tab in Web Client.
3. Select the **Alarms** node in the Module tree.

   The alarms are displayed in the Alarms page in the right-hand side.

Adding a new view

You can add or create a new view by specifying various criteria and providing a name for the view. The views you create enable you to quickly monitor the managed objects. You can create multiple views that display a variety of information.

Example
You can create a new view named MasterAlarms which shows only alarms in a particular managed object. Within this MasterAlarms view, you can create more views. For example, MA1 can have a different set of criteria, say only critical alarms in that particular network. Deleting MasterAlarms deletes its child views (MA1, MA2, and so on).

To add an alarm view, follow these steps:

At the Fault Management tab of Integrated EMS

1 Click the **Add Child View** menu item in the Module menus area.

The Add Alarm Custom View page opens, listing the options to create the child view.

2 Enter the required criteria in the fields available. For information on each of the fields in this form, refer to the Defining the search criteria of "Setting the search criteria for Custom view of alarms" module. Wildcard characters can be used to specify the matching criteria. For information on the wildcard characters that can be used, refer to the "Custom View Filtering Criteria" of *Integrated EMS Basics, NN10329-111*.

If none of the fields is filled in (except for custom view Name), then by default all the fields are set with the value 'all'.

3 Click the **Submit** button after configuring the criteria.

Modifying a view

A view can be modified to change the criteria that were set or to rename the view.

To modify an alarm view, follow these steps:

At the Fault Management tab of Integrated EMS

1 Click the required view under the **Alarms** tree in the Module tree.

2 Click the **Edit View Criteria** menu item in the Module menus area.

The custom view form is displayed with the configurations (made at the time of creation or last modification). For information on each of the fields in this form, refer to the Defining the search criteria section in the "Setting the search criteria for Custom view of alarms" module. Wildcard characters can be used to specify the matching criteria. For information on the wildcard characters that can be used, refer to the "Custom View Filtering Criteria" of *Integrated EMS Basics, NN10329-111*.

3 Click the **Submit** button to update the changes.

Removing a view

A view can be deleted from the Alarms List View when you do not require it anymore.

To remove an alarm view, follow these steps:

At the Fault Management tab of Integrated EMS

1 Click the required view under the **Alarms** tree in the Module tree.

Note: The parent node Alarms cannot be deleted from the Fault Management tree. Only those views created under this parent node can be deleted.

2 Click the **Remove View** menu item in the Module menus area.

A dialog is launched to confirm the operation. Click the **Yes** button to remove the view.