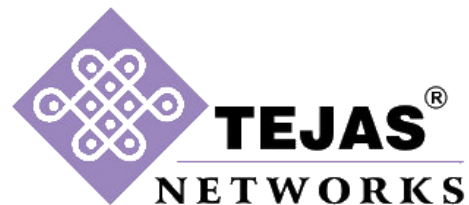


NMS7.5.1.0

New advanced features of NMS to improve user experience



Contents



- **Basic usage and features of NMS**
 - Ribbon Toolbar details
 - Rich Tool Tips
 - Node properties to be displayed in Topology view
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 - Advance search bar
 - Responsive NMS UI
 - Advance breadcrumbs
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 - Locate Topology view operation from other page
 - NMS as desktop application and desktop installer
 - Advance Mega Menu

Contents

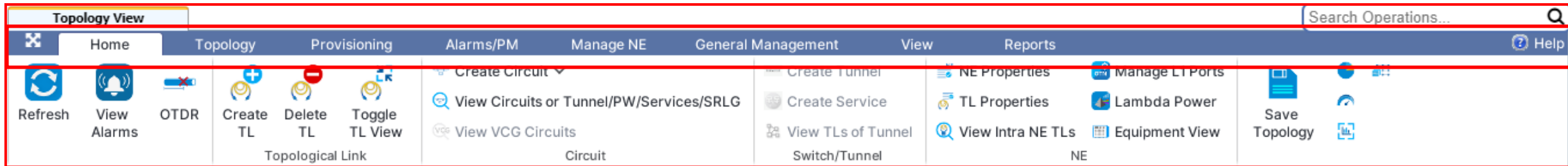


- **Maintenance Operation in NMS**
 - Alarm clearing procedure from Manage Alarm page
 - Advance Alert Message
 - Report download feature on client machine
 - Alarm display as bubble over node Icon in Topology

Ribbon toolbar



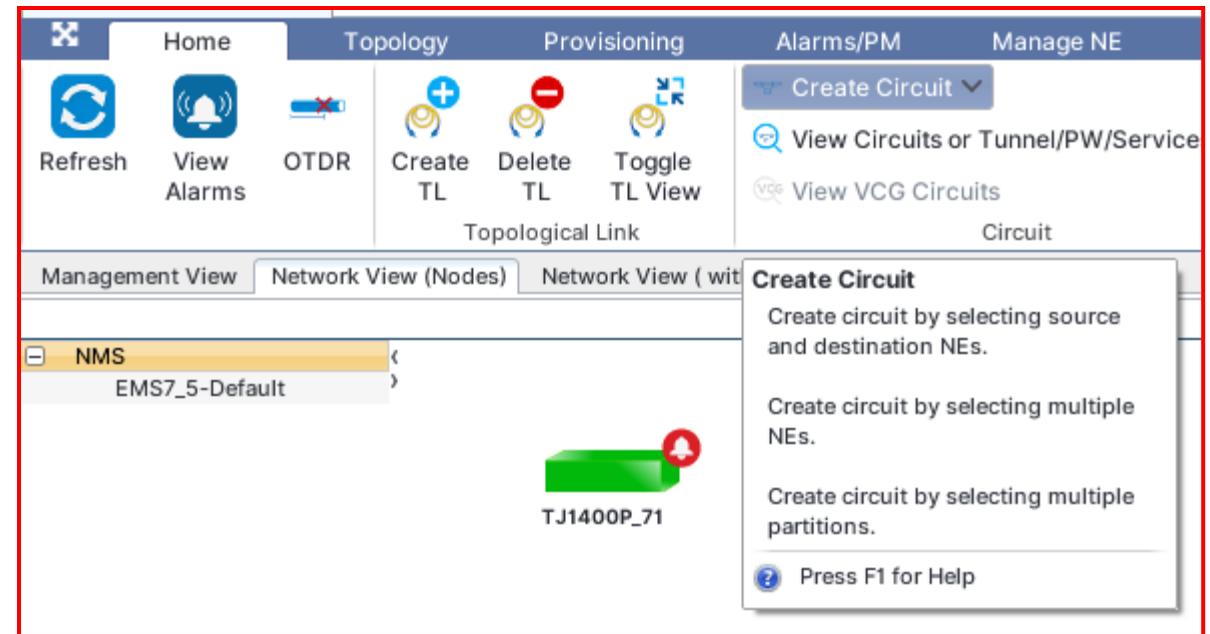
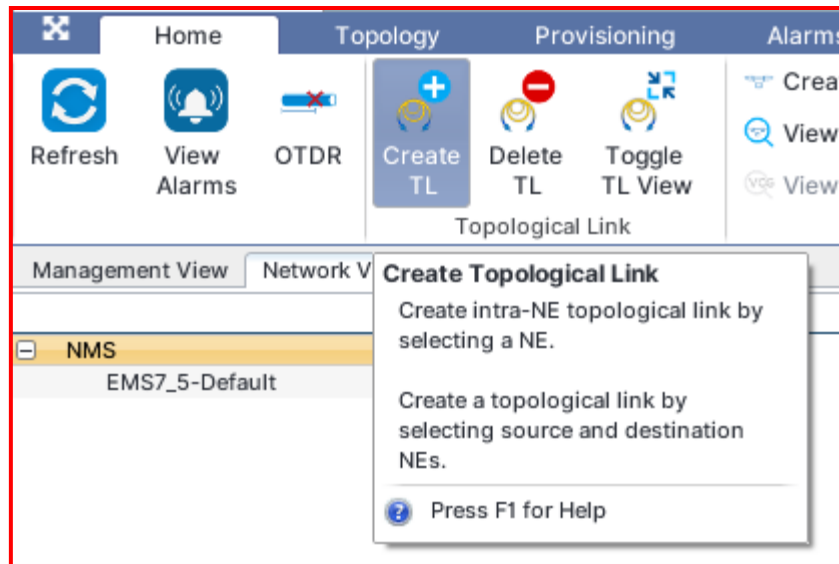
- There is separate Ribbon tool for topology view which has tabs like Home, Topology, Provisioning, Alarms/PM, Manage NE, General Management, View and Reports.
- These Tabs contains related functions and operations.
- Home Tab shall contain most frequently used operations.
- This makes 'Topology view' operations well organized and easily accessible.



Rich Tool Tips



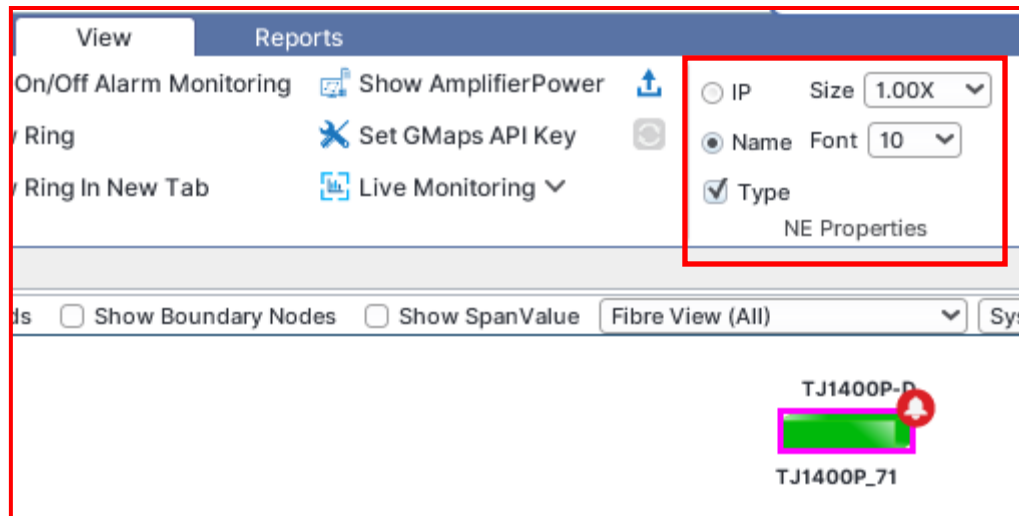
- For all toolbar operation, tips are present when cursor is placed over the options.
- There is brief explanation given on every toolbar operations.



Node properties from Topology view



- Few options are given under Node properties of Topology like:
 - option to display IP/Name of the node.
 - option to display the node type like TJ1400P, TJ14XX or TJ1600c
 - option increase the node icon
 - option to increase font of the label displayed under nodes
- These options are present under Topology view → View



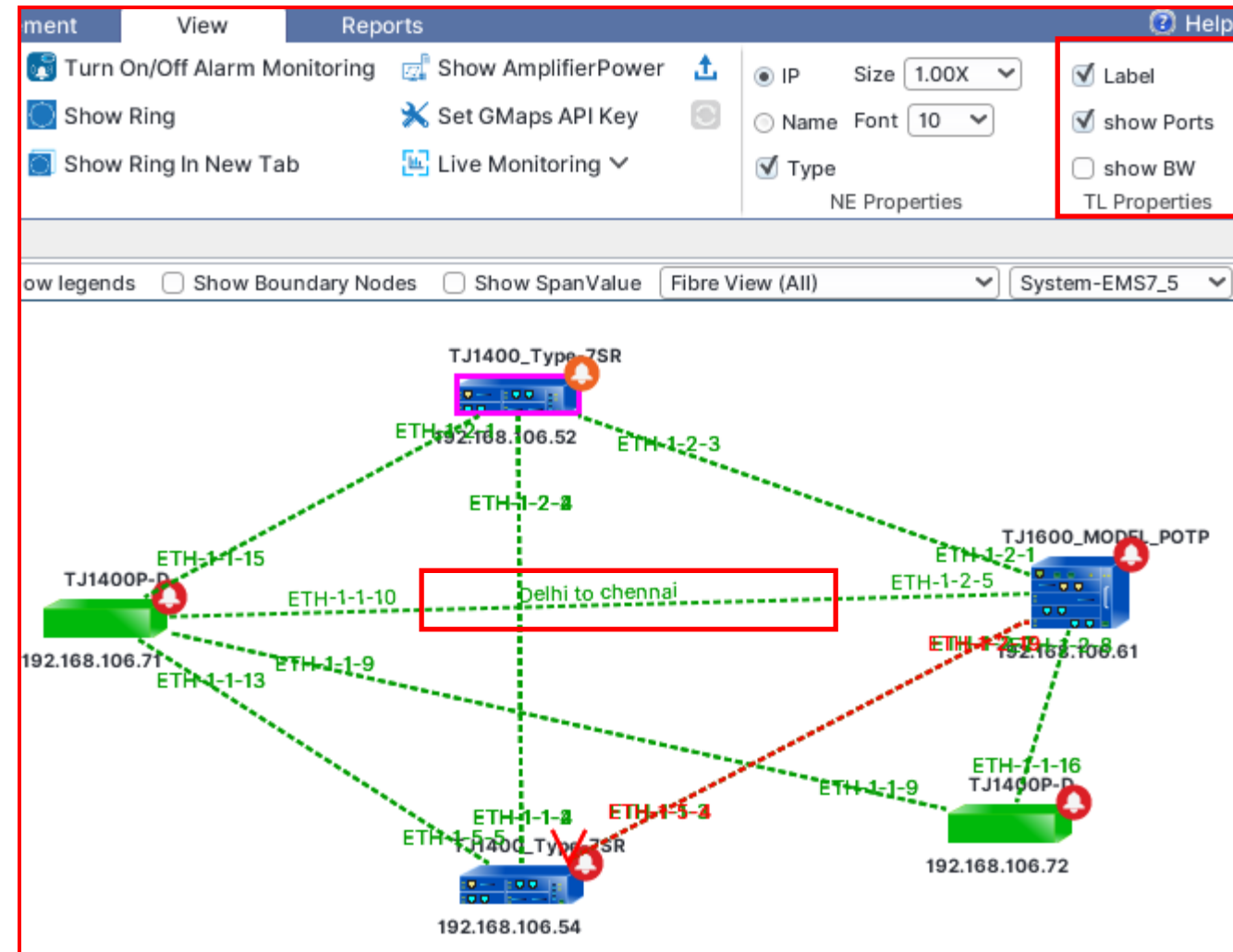
TL properties from Topology view



- Few options are present under TL properties of Topology like:

- option to view Labels given to TL
- option to display ports of the TL
- option to show BW

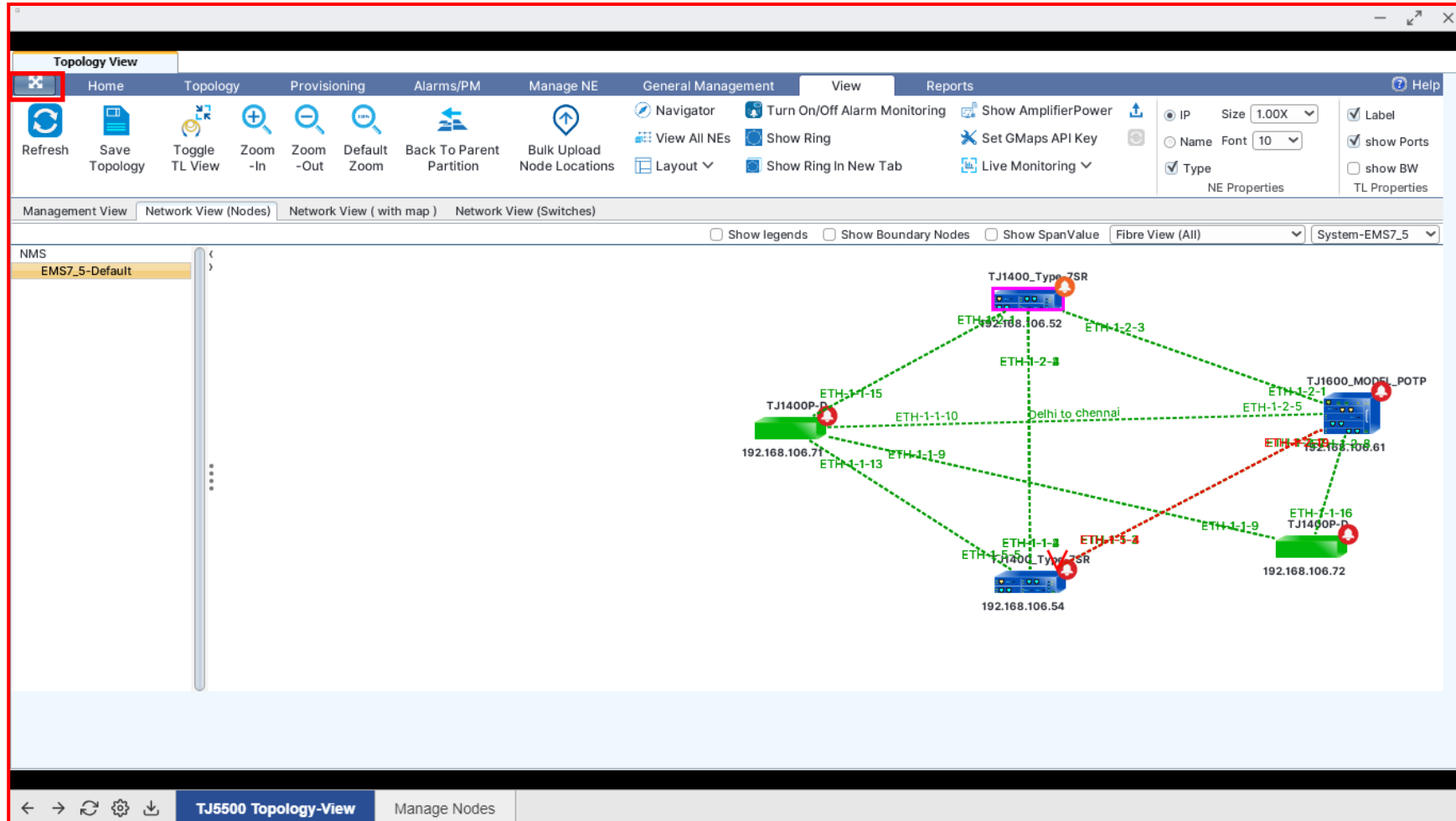
These options are present under Topology view → View



Expand Topology view in full screen mode



- Topology can be opened in full screen mode. Icon  is present on the Ribbon Tool bar.



Advance search bar



- NMS provides a search bar where pre-defined set of commonly used operations can be searched and located.
- It also provides search option to internal page operation and Topology view operation

The screenshot displays the NMS interface for managing alarms. A search bar at the top left contains the text "alarms". Below it, a dropdown menu lists several options: "Alarms", "Alarms List (Topology View)", "Alarms Reports", "View Alarms", "Show Alarms", and "View Alarms (Topology View)". A red arrow points from the "Alarms List (Topology View)" option to the "Alarms Reports" link in the main navigation bar. The main content area features a toolbar with buttons for "Acknowledge Alarm", "Filter Alarms", "Show Clearing Procedure", "Show Node", "Unacknowledge Alarm", "View Affected Objects", "Reports", and "Rows Per Page". Below the toolbar, there are tabs for "ALARMS" and "SYSTEM GENERATED". The "ALARMS" tab is active, showing a table of alarms with columns: Severity, EMS Name, Node IP, Node Name, EMS Time, Source Time, Object Label, Probable Cause, and Description. The table contains eight rows of alarm data.

Severity	EMS Name	Node IP	Node Name	EMS Time	Source Time	Object Label	Probable Cause	Description
critical	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	19/03/2037 05:21:57	ETH-1-1-11	LOS	Loss of Signal
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	19/03/2037 05:21:56	ETH-1-1-11	UNIDENTIFIED	Link Down
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	19/03/2037 05:18:08	ETH-1-1-501	LOS	Loss of Signal
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	13/03/2037 09:17:46	ETH-1-1-10	UNIDENTIFIED	Link Down
critical	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	13/03/2037 09:17:46	ETH-1-1-10	LOS	Loss of Signal
critical	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	13/03/2037 09:06:03	CESIWF-1-1-501	UNIDENTIFIED	Loss of Frames
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	30/01/2037 07:32:32	SHELF-1	EQPT	Timing Generation

Responsive NMS UI



- NMS UI is adaptive to any screen size and any resolution.
- Most of the pages have filter option which is hidden by default.
- User can opt for filters to be displayed and window will automatically shrink to fit the filter options.

The top screenshot shows the full-width view of the NMS UI. The filter button is hidden. The table below shows the data for the 'TOPOLOGICAL LINKS' tab.

TL Id	Local EMS	Local Node Name	Local IP	Local Port	Remote EMS	Remote Node Name	Remote IP	Remote Port	Direction	BW Th	Perce
5	EMS7_5	TJ1400P_72	192.168.106.72	ETH-1-1-9 (.1q)	EMS7_5	TJ1400P_71	192.168.106.71	ETH-1-1-9 (.1q)	BIDIRECTIONAL		
8	EMS7_5	TJ1400_52_R1	192.168.106.52	ETH-1-2-1 (.1q)	EMS7_5	TJ1400P_71	192.168.106.71	ETH-1-1-15 (.1q)	BIDIRECTIONAL		
11	EMS7_5	TJ1400_54_R2	192.168.106.54	ETH-1-1-2 (.1q)	EMS7_5	TJ1400_52_R1	192.168.106.52	ETH-1-2-2 (.1q)	BIDIRECTIONAL		
12	EMS7_5	TJ1400_54_R2	192.168.106.54	ETH-1-1-4 (.1q)	EMS7_5	TJ1400_52_R1	192.168.106.52	ETH-1-2-4 (.1q)	BIDIRECTIONAL		
13	EMS7_5	TJ1400_54_R2	192.168.106.54	ETH-1-1-4 (.1q)	EMS7_5	TJ1400_52_R1	192.168.106.52	ETH-1-2-4 (.1q)	BIDIRECTIONAL		

The bottom screenshot shows the filtered view of the NMS UI. The filter button is visible and the filter options are expanded. The table below shows the data for the 'TOPOLOGICAL LINKS' tab.

TL Id	Local EMS	Local Node Name	Local IP	Local Port	Remote EMS	Remote Node Name	Remote IP	Remote Port	Direction	BW Th	Perce
5	EMS7_5	TJ1400P_72	192.168.106.72	ETH-1-1-9 (.1q)	EMS7_5	TJ1400P_71	192.168.106.71	ETH-1-1-9 (.1q)	BIDIRECTIONAL		
8	EMS7_5	TJ1400_52_R1	192.168.106.52	ETH-1-2-1 (.1q)	EMS7_5	TJ1400P_71	192.168.106.71	ETH-1-1-15 (.1q)	BIDIRECTIONAL		
11	EMS7_5	TJ1400_54_R2	192.168.106.54	ETH-1-1-2 (.1q)	EMS7_5	TJ1400_52_R1	192.168.106.52	ETH-1-2-2 (.1q)	BIDIRECTIONAL		
12	EMS7_5	TJ1400_54_R2	192.168.106.54	ETH-1-1-4 (.1q)	EMS7_5	TJ1400_52_R1	192.168.106.52	ETH-1-2-4 (.1q)	BIDIRECTIONAL		

Advance breadcrumbs



- NMS7.5 support breadcrumbs which will help user to navigate better.

The screenshot displays the NMS7.5 user interface. At the top is a navigation bar with icons and labels for Home, Configuration, Topology, Fault, Administration, Reports, and Security. Below this is a breadcrumb trail: Home > ManageTL >. Under the breadcrumbs is a row of action buttons: Add TL, Delete TL, Edit TL, Select TLs, Alarms, Bandwidth Utilization, View TL Details, Reports, and Group By. Below the buttons are three tabs: TOPOLOGICAL LINKS (selected), AMPLIFIER TRUNKS, and CLOUD LINKS. The main content area contains a table with 8 columns: TL Id, Local EMS, Local Node Name, Local IP, Local Port, Remote EMS, Remote Node Name, and Remote IP. The table lists four topological links.

TL Id	Local EMS	Local Node Name	Local IP	Local Port	Remote EMS	Remote Node Name	Remote IP
5	EMS7_5	TJ1400P_72	192.168.106.72	ETH-1-1-9 (.1q)	EMS7_5	TJ1400P_71	192.168.106.71
8	EMS7_5	TJ1400_52_R1	192.168.106.52	ETH-1-2-1 (.1q)	EMS7_5	TJ1400P_71	192.168.106.71
11	EMS7_5	TJ1400_54_R2	192.168.106.54	ETH-1-1-2 (.1q)	EMS7_5	TJ1400_52_R1	192.168.106.52
12	EMS7_5	TJ1400_54_R2	192.168.106.54	ETH-1-1-4 (.1q)	EMS7_5	TJ1400_52_R1	192.168.106.52

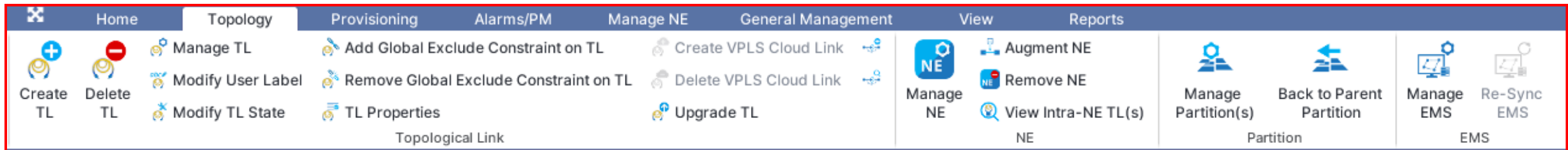
Grouping of Web Tool Bar



- In Topology view, Similar tools are grouped together for easy access of tools.
- Frequently used tools are placed under 'Home' tab. Again under home tools are grouped as per TLs, circuits, switch/tunnel and NE.



- All Topology Tools are placed under 'Topology' like TL related, augmentation etc.



Locate topology operation from other page



- Most operations when done from Topology view have easy procedure and simple to understand. This NMS has an option to locate topology view operations from other pages.
- For Example 'Modify user label' option is shown in Manage TL page. When User clicks on this option user is taken to Topology view and that particular TL and tool is highlighted.

TL Id	Local EMS	Local Node Name	Local IP	Local Port
5	EMS7_5		192.168.106.72	ETH-1-1-9 (.1q)
8	EMS7_5		192.168.106.52	ETH-1-2-1 (.1q)
11	EMS7_5		192.168.106.54	ETH-1-1-2 (.1q)
12	EMS7_5			
13	EMS7_5	TJ1400_54_R2		
14	EMS7_5	TJ1400_54_R2		

Topology View Operation

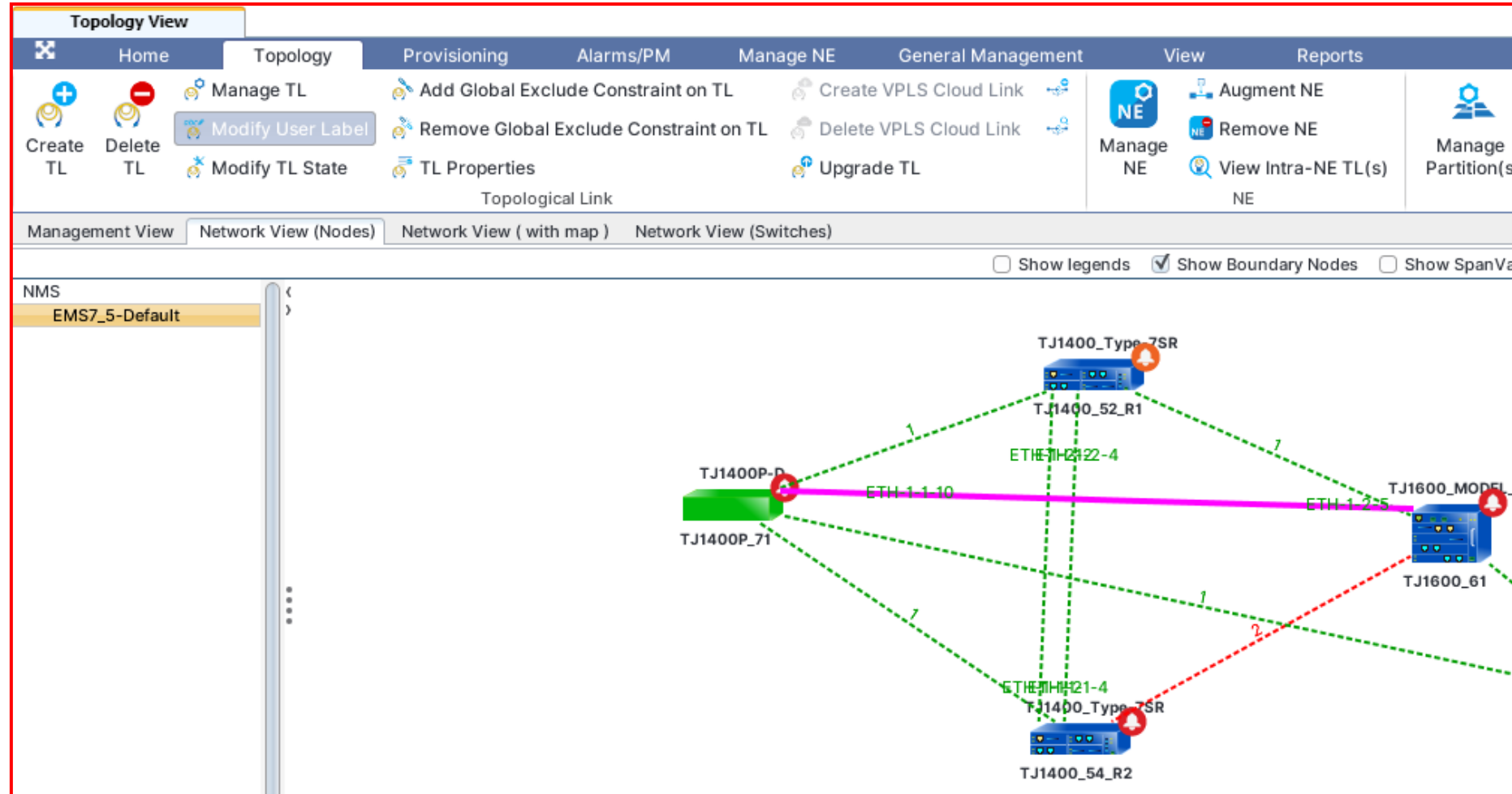
Please open Topology View to perform the operation

OK

Locate topology operation from other page



- TL is selected and 'Modify User Label' tool is highlighted in the tool bar.



NMS as a Desktop application and Desktop installer



- This version of NMS provides desktop application which can be launched as desktop application independent of the browser.
- NMS also provides desktop Installer for windows and Linux.

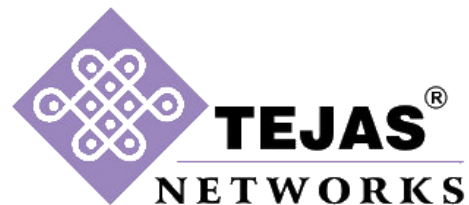
Advanced Mega menu



- Menu items are arranged in the form of Mega menu which looks organized and accessible.
- This makes navigation simple and easy.
- User has option to switch to old menu by setting User preferences.



Maintenance



Alarm clearing procedure from Manage alarm page



- For all the alarms, NMS will display alarm clearing procedure.
- Select the alarm and click on 'show'.

major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-12	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-13	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-2	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-4	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-5	UNIDENTIFIED	Link Down	<input type="checkbox"/>			

critical	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	13/03/2037 09:06:03	CESIWF-1-1-501	UNIDENTIFIED	Loss of Frames	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	30/01/2037 07:32:32	SHELF-1	EQPT	Timing Generation	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-1	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-12	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-13	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-2	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-4	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
major	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:31:29	ETH-1-1-6	UNIDENTIFIED	Link Down	<input type="checkbox"/>			
critical	EMS7_5	192.168.106.72	TJ1400P_72	15/10/2019 17:00:09	29/01/2037 07:30:36	PCPE02-1-1	EQPT	Fan Failed	<input type="checkbox"/>			
critical	EMS7_5			18/10/2019 08:21:01	18/10/2019 08:21:01	NMS139	EMS	Memory Usage Exc	<input type="checkbox"/>			

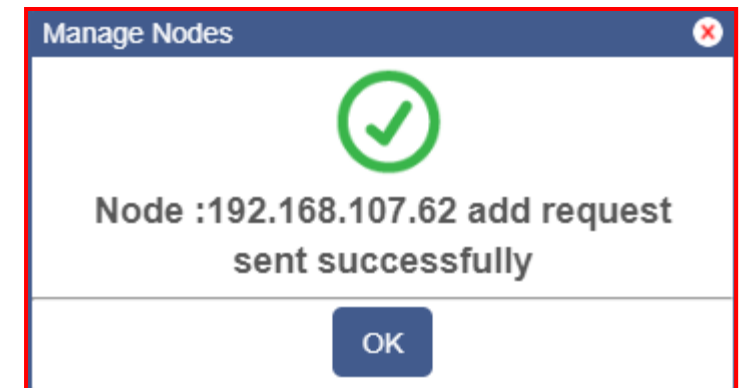
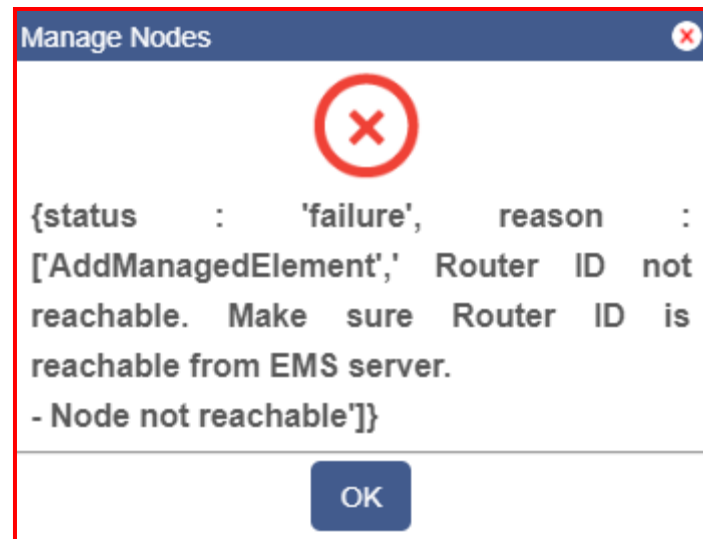
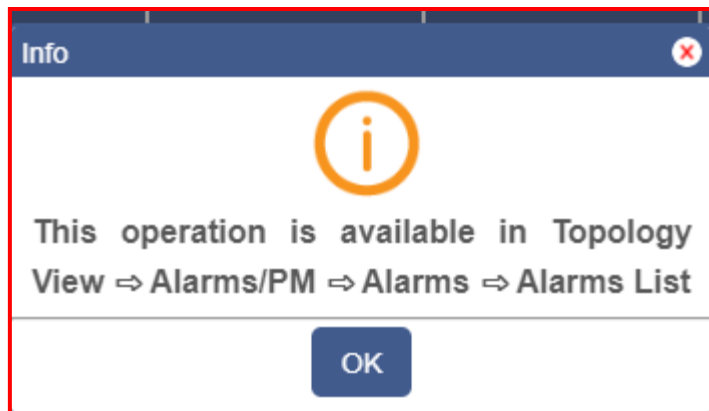
Node IP : 192.168.106.72
Object Label : ETH-1-1-13
Description : Link Down

Clearing Procedure
 To clear this alarm,
 1. Check for the alarm on local VCG port. If the alarm is present, go to step 3
 2. Ensure that local Ethernet port is admin up
 3. Check if the alarm is present on local node
 4. Ensure that auto negotiation is enabled on the local node
 5. Check for the VCG related alarms on the local node Ethernet port

Advance Alert Message



- NMS shall display alert message with new style for categories such as Error, confirmation, information, success, critical and warning.



Report download feature on client machine



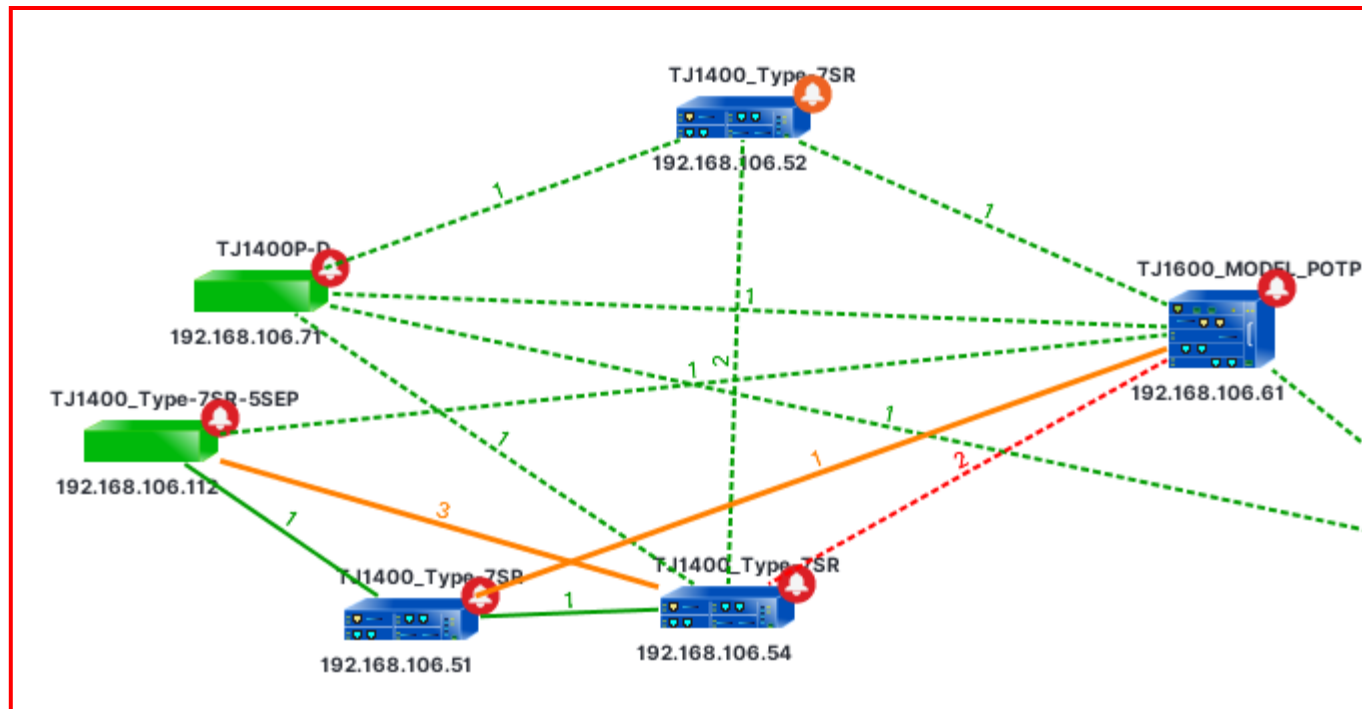
- Few reports can be directly be downloaded in client machine.
- Goto Reports→ Consolidated Reports
- Select required EMS, select the type of report to be generated from the drop down and click on 'Generate report'.
- Once the report is collected, It is will shown as a notification. Click on 'Download report'. Report will be downloaded into client machine.

The screenshot shows a web interface for generating and downloading reports. It is divided into three main sections: 'Report Criteria', 'Remote Destination Details', and 'Filter parameters'.
Report Criteria: Contains a dropdown for 'Select EMS (Available)' with 'EMS7_5' selected, a dropdown for 'Report Type' with 'Optical Power Report' selected, and a radio button for 'Format' set to 'CSV'.
Remote Destination Details: Contains fields for 'File Name', 'Destination Machine IP', 'Username', 'Password', and 'Location'. A red box highlights the 'File Name' field, which contains the text 'Download report optical report\''. Below this, a message box displays two lines of text: 'Consolidated OpticalPowerReport optical report for EMS7_5 generated successfully.' and 'Operation OpticalPowerReport for EMS EMS7_5 is completed successfully'. A 'CheckAvailability' button is located below the 'Location' field.
Filter parameters: Contains a 'Node Name' field with a checkbox for 'IP' and a '+' icon. Below it is an empty text box and a 'GenerateReport' button.

Alarm display as bubble over node Icon in topology view



- Alarms on the node are represented as a bubble on node in topology view.
- The colour of the alarm bubble corresponds to max severity alarm present on the node.
- Alarms on the node is will be displayed after double clicking in the bubble.





Thank you