



NSP

Network Services Platform

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Service Supervision Application

Help

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1 Service Supervision

1.1 Why use Service Supervision?

The Service Supervision application allows you to monitor the health of services using KPIs, and monitor the fault status of a network. Service Supervision uses supervision groups, which can belong to one or more views.

A supervision group is a logical set of monitored services that is specified by user-defined filters. Supervision groups can be used to partition services into distinct categories, and are associated with views. There is no limit to the number of supervision groups to which a service can belong.

Up to 50 000 services can be included in a supervision group. VLL, VPLS, MVPLS, IES, and VPRN services can be included.


The criteria for monitored objects in a supervision group are based on inclusion filters. The inclusion filter is the rule on whether to include an object in a supervision group. For example, for the Wireless Supervision application, the inclusion filters used to specify the eNodeBs in a supervision group must exclude pre-provisioned NEs and all other non-eNodeB NE types to avoid misleading alarms and KPI numbers.

A view is a collection of one or more supervision groups that provides a high-level view of a group of services.

When NSP is deployed with the NSD module and the Service Fulfillment application, the Service Supervision application monitors services provisioned by the Service Fulfillment application and/or other management applications, such as the NFM-P service manager. The NSP Group Manager application is used to configure and manage supervision views and groups for the Service Supervision application.



1.2 What if I don't see anything in Service Supervision?


If you've opened Service Supervision and see only a blank GUI, you need to select a summary view. The information that appears in Service Supervision is organized under summary views.

- Click **More**  , **Summary View** and choose a summary view.
If there aren't any summary views available, your system administrator must create a summary view in the Group Manager application.

Configure a summary view in Group Manager

You can launch Group Manager directly from Service Supervision. You must have administrative access rights to access Group Manager.

- Click **More**  , **Group Manager**.
Group Manager opens on a separate browser tab.
- Configure a summary view. For information on configuring views and groups, click **Help**  in the Group Manager GUI.

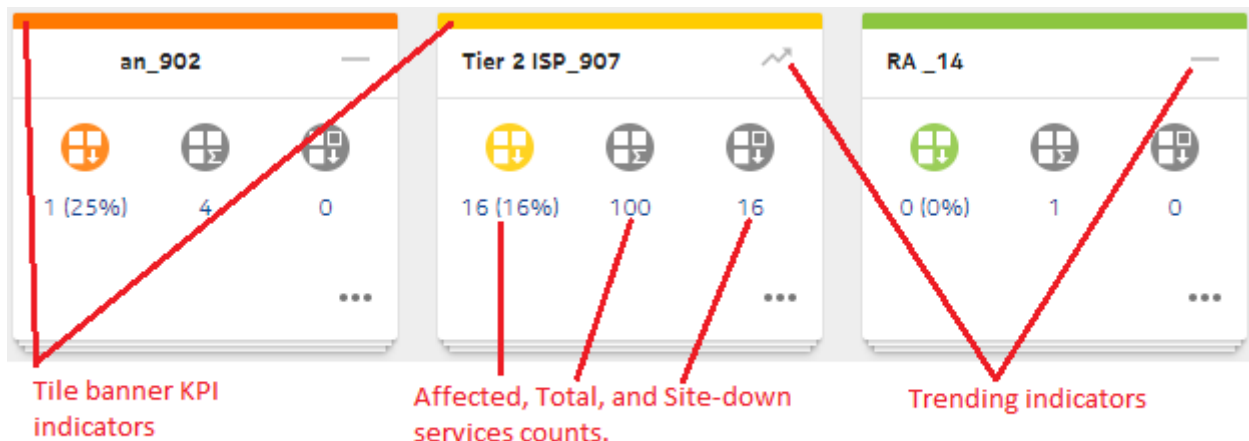
When you are finished, the new summary view appears in Service Supervision under the **More**  , **Summary View** menu.



1.3 Access control in Service Supervision

An operator’s visibility of network equipment, services, and alarms is based on access control settings, which are configured by an administrator. Depending on your access settings, some information may not be visible. See the User Manager Application Help and your network administrator for more information.



1.4 Summary view

Each tile in the Summary View represents a group of services. The tile color represents the percentage of services that are affected, providing a high-level indication of the status of the groups. By default, red means that over 60% of services are affected, orange means 21% to 60% affected, yellow means 1% to 20% affected, and green means all services are up. Each tile indicates the number of affected services in the group, as well as the total number of services in the group and the number of services with sites down.



The **Trending** icon indicates that the number of affected services in a group has recently increased  , or remained unchanged  .

Perform the following tasks in the Summary view:

- **List the services in a supervision group:** Double-click on a supervision group tile. The Services list for the group opens, filtered to affected services; see 1.6 “Services list” (p. 7).
- **Open the Alarm list for a supervision group:** On the group tile, hover over **More Details**  and click **Alarm List**  to view the list of alarms for all services in the group.
- **View more details about services in a group:** On the group tile, click **More Details**

••• to expand the tile and view information about the number of affected services, and services with sites, SAPs, and SDPs that are down, as well as OAM failures.





1.5 How do I see the services list for a supervision group?

- Double-click on a supervision group tile.
The Services list for the group opens, filtered to affected services; see 1.6 “Services list” (p. 6).




1.6 Services list

The Service list can display all services in a supervision group, only services in the supervision group that recently had configuration changes, or only services in the supervision group that are affected by recent network events. You change the contents of the Services list by applying a filter. You can reduce the list contents further by filtering under a specific column with a text string or filter option.

Service status is indicated by the following icons:

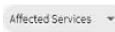


- Service operational state is **Up** 
- Service operational state is **Down** 
- Service operational state is **Partially Down** 
- Service operational state is **Unknown** 


Service KPI information is indicated by the following icons, for a variety of service objects:

- Service object admin state is **Up** 
- Service object admin state is **Down** 
- Service object is misconfigured 
- No such object on service -

1.7 How do I manage the Services list contents?

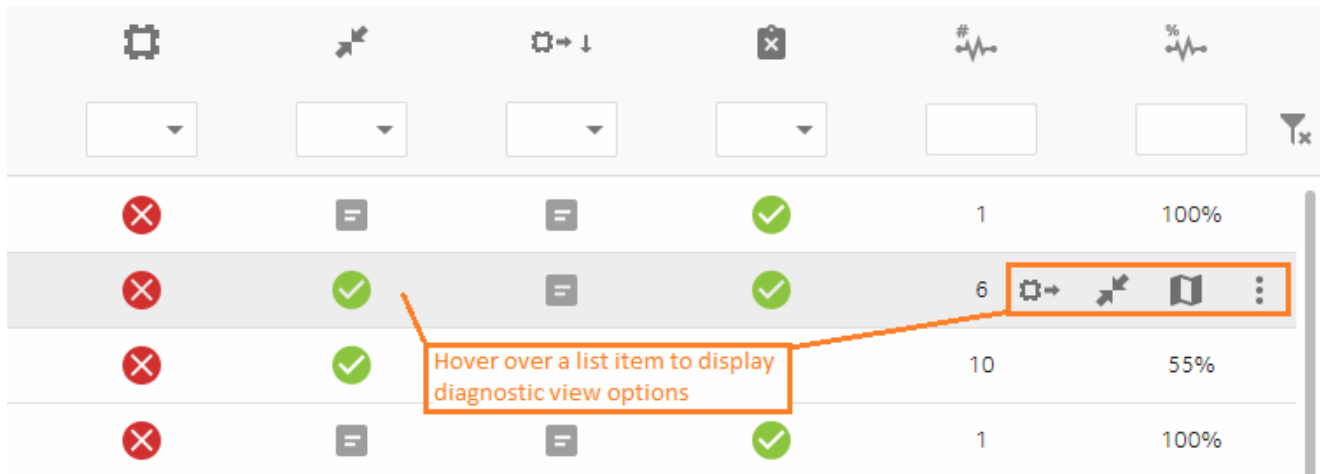
The Services list has a variety of tools available to help you control what you see, including sorting and filtering options:









- **Control what I see in the Services list:** The list is filtered to affected services by default. If there are no affected services in the group, the list is empty. Change the filter to **All Services**. Click on the **Filter** menu  and select **All Services**, **Affected Services**, or **Recently Changed Services**.
- **Filter the Services list under a specific column:** Type a text string in the text field or select a filter option at the top of a column and press **Enter**. Click **Clear Filter**  to clear column filters.
- **Sort the Services list under a specific column:** Click on a column header to sort the list under that column. Click the column header a second time to toggle the sort order (ascending/descending), as indicated by an **Up** or **Down** arrow.
- **Refresh the list:** On the application toolbar, click **Refresh List**  to update the services list contents.

- **Export the Services list:** On the application toolbar, click **More**  , **Export** to export the current page or selected rows to a CSV file.

1.8 How do I investigate a service?

From an individual Service list item, you can open a variety of diagnostic views that display the service in terms of its position in the network, its associated objects, and recent alarm messages and events. You can also view test results for a service. You access the diagnostic views by hovering over a list item and then clicking on the option buttons that appear on the right side of the item.



- **View a service in the IGP map:** On the right side of a Service list item, click **Highlight on IGP Map**  to open the IGP map with the service sites and SDP bindings highlighted; see [1.23 “IGP map” \(p. 14\)](#).
- **List the service sites that host a service:** Double-click on a service item in the list. The Services list opens, displaying all sites associated with the service; see [1.19 “Sites list” \(p. 12\)](#).
- **List the SAPs or SDP bindings for a service:** On the right side of a Service list item, click **SDP Bindings**  or **SAPs**  to view a list of all of the SDP bindings or SAPs on the service; see [1.15 “SAP list” \(p. 10\)](#) or [1.12 “SDP Bindings list” \(p. 9\)](#).
- **View service alarms:** On the right side of a Service list item, click **More**  , **Alarms**.
View historical alarms: On the right side of a Service list item, click **More**  , **Historical Alarms**.
- **View service events:** On the right side of a Service list item, click **More**  , **Event Timeline**. See [1.22 “Event Timeline” \(p. 13\)](#) for more information.
- **View OAM test results for a service:** On the right side of a Service list item, click **More**  , **OAM Test Results** to view the latest OAM tests results for scheduled test suites for which the selected service is defined as a test entity.
- **Run Analytics reports on a service:** On the right side of a Service list item, click **More**  , **Analytics Reports** to launch the Analytics Reports dashboard.

You must have the appropriate AA license to run Analytics reports.

1.9 How do I monitor a service?

If you want to keep a close eye on a particular service to monitor its KPI performance, you can add it to the Watch Drawer. The Watch Drawer can be docked to the side of the Service Supervision GUI so that you can always see the services listed in it, and monitor the services for KPI changes as you troubleshoot your network.


- On the right side of a Service list item, click **More**  , **Add to Watch View**.

1.10 How do I view the sites for a specific service?

- Double-click on a Service list item. The Sites list opens with a list of sites that host the service; see 1.19 “Sites list” (p. 12).

1.11 How do I make changes to a service?





If you decide that you need to make configuration changes to a service to fix a problem, you can open the service in its management application.

- On the right side of a Service list item, click **More**  , **View Properties**.
The management application launches and opens the service for configuration changes.

1.12 SDP Bindings list



The SDP Bindings list displays all SDP bindings associated with a service. You can reduce the list contents by filtering under a specific column with a text string or filter option.


SDP binding status is indicated by the following icons:

- SDP binding operational state is **Up** 
- SDP binding operational state is **Down** 
- SDP binding operational state is **Partially Down** 
- SDP binding operational state is **Unknown** 

1.13 How do I manage the SDP Bindings list contents?

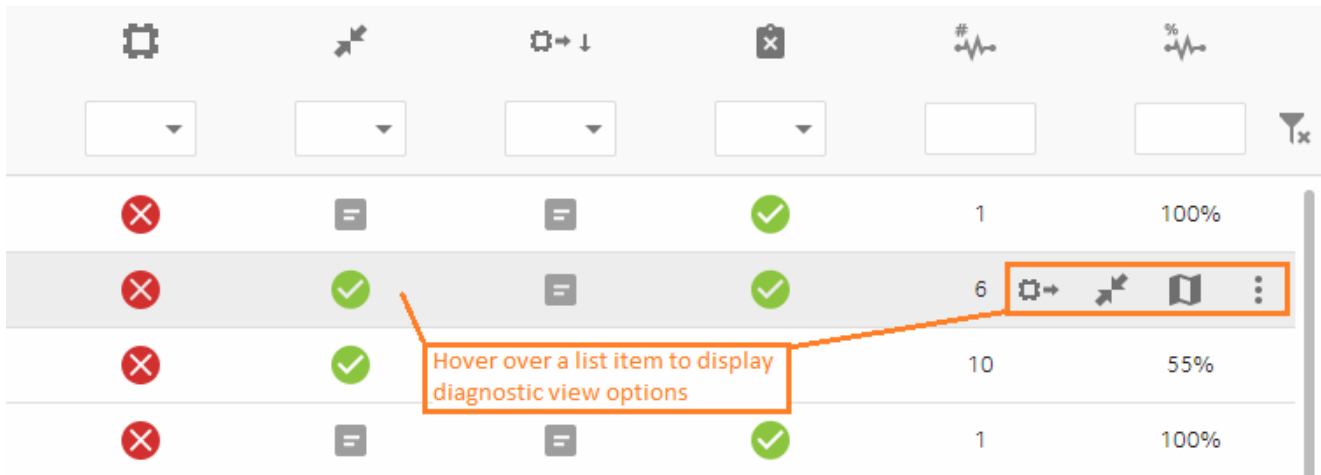
The SDP Bindings list has a variety of tools available to help you control what you see, including sorting and filtering options:




- **Filter the SDP Bindings list under a specific column:** Type a text string in the text field or select a filter option at the top of a column and press **Enter**. Click **Clear Filter**  to clear column filters.
- **Sort the SDP Bindings list under a specific column:** Click on a column header to sort the list under that column. Click the column header a second time to toggle the sort order (ascending/descending), as indicated by the **Up** or **Down** arrow.
- **Refresh the list:** On the application toolbar, click **Refresh List**  to update the list contents.

- **Export the SDP Bindings list:** On the application toolbar, click **More**  , **Export** to export the current page or selected rows to a CSV file.

1.14 How do I investigate an SDP binding?

From an individual SDP binding list item, you can open a variety of diagnostic views that display its recent alarm messages, events, or test results.







- **View SDP binding alarms** On the right side of an SDP Bindings list item, click **Alarms**  .
- **View SDP binding events** On the right side of an SDP Bindings list item, click **Event Timeline**  .
See [1.22 “Event Timeline”](#) (p. 13) for more information.
- **View OAM test results for an SDP binding** On the right side of an SDP Bindings list item, click **OAM Tests**  .

1.15 SAP list




The SAP list displays all SAPs associated with a service. You can reduce the list contents by filtering under a specific column with a text string or filter option.

SAP status is indicated by the following icons:

- SAP operational state is **Up** 
- SAP operational state is **Down** 
- SAP operational state is **Partially Down** 
- SAP operational state is **Unknown** 

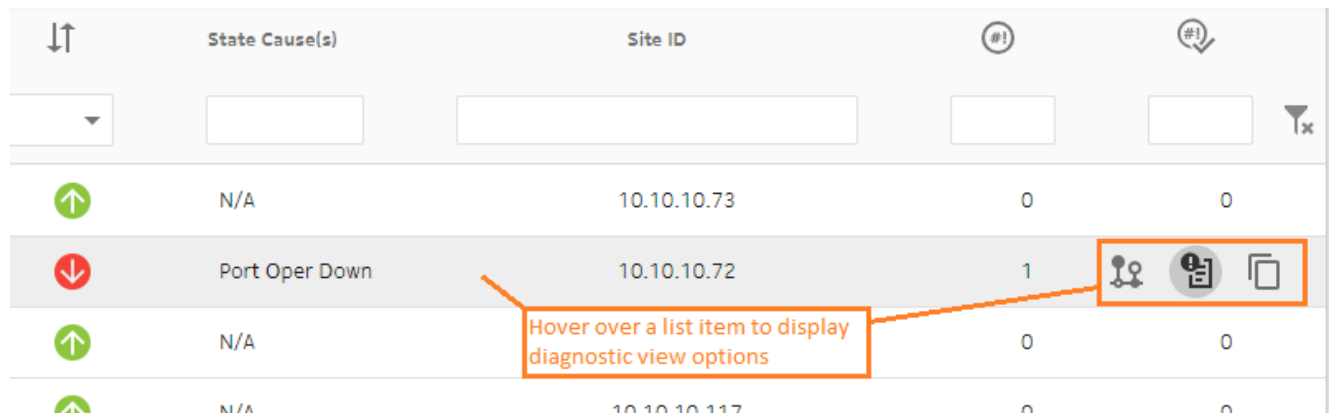
1.16 How do I manage the SAP list contents?








The SAP list has a variety of tools available to help you control what you see, including sorting and filtering options:




- **Filter the SAP list under a specific column:** Type a text string in the text field or select a filter option at the top of a column and press **Enter**. Click **Clear Filter**  to clear column filters.
- **Sort the SAP list under a specific column:** Click on a column header to sort the list under that column. Click the column header a second time to toggle the sort order (ascending/descending), as indicated by the **Up** or **Down** arrow.
- **Refresh the list:** On the application toolbar, click **Refresh List**  to update the list contents.
- **Export the SAP list:** On the application toolbar, click **More** , **Export** to export the current page or selected rows to a CSV file.

1.17 How do I investigate a SAP?

From an individual SAP list item, you can open a variety of diagnostic views that display its recent alarm messages, events, or test results.




	State Cause(s)	Site ID	#!	#!
	N/A	10.10.10.73	0	0
	Port Oper Down	10.10.10.72	1	  
	N/A		0	0
	N/A	10.10.10.117	0	0

- **View SAP alarms:** On the right side of a SAP list item, click **Alarms** .
- **View SAP events:** On the right side of a SAP list item, click **Event Timeline** . You can open the Event Timeline for multiple SAPs by selecting two or more SAPs and clicking **Event Timeline**.
See 1.22 “Event Timeline” (p. 13) for more information.
- **View OAM test results for a SAP:** Select two or more SAP list items and click **OAM Tests**  on the toolbar.

1.18 How do I copy a service object?

You can open a service, SDP binding, or SAP object in a separate window and then copy its site and KPI data to the clipboard for transfer to a text file or other application.





- On the right side of a service or SDP binding list item, click **More** , **Open in Copy Window**.

-
- On the right side of a SAP list item, click **Open in Copy Window**  .

1.19 Sites list




The Sites list displays all sites associated with a service. Each site displays basic status information and alarm counts.

Site status is indicated by the following icons:

- Site operational state is **Up** 
- Site operational state is **Down** 
- Site operational state is **Partially Down** 
- Site operational state is **Unknown** 

1.20 How do I manage the Site list contents?

The Site list has a variety of tools available to help you control what you see, including sorting and filtering options:

- **Filter the Site list under a specific column:** Type a text string in the text field or select a filter option at the top of a column and press **Enter**. Click **Clear Filter**  to clear column filters.
- **Sort the Site list under a specific column:** Click on a column header to sort the list under that column. Click the column header a second time to toggle the sort order (ascending/descending), as indicated by the **Up** or **Down** arrow.
- **Refresh the list:** On the application toolbar, click **Refresh List**  to update the list contents.
- **Export the Site list:** On the application toolbar, click **More**  , **Export** to export the current page or selected rows to a CSV file.

1.21 How do I investigate a service site?

From an individual service site list item, you can open a variety of diagnostic views that display the site in terms of its associated objects, and recent alarm messages and events. You access the diagnostic views by hovering over a list item and then clicking on the option buttons that appear on the right side of the item.

Configuration	SAPs	SDP Bindings	Count	Percentage
✗	=	=	1	100%
✗	✓	=	6	55%
✗	✓	=	10	55%
✗	=	=	1	100%

Perform the following tasks in the Sites list:

- **List SAP and SDP bindings on a site:** On the right side of a service site list item, click **SDP Bindings** or **SAPs** to view a list of all of the SDP bindings or SAPs on the site; see [1.15 “SAP list” \(p. 10\)](#) or [1.12 “SDP Bindings list” \(p. 9\)](#).
- **View Event Timeline for a site:** On the right side of a service site list item, click **More** , **Event Timeline**.
- **View service site alarms:** On the right side of a service site list item, click **More** , **Alarms**.

1.22 Event Timeline

The Event Timeline records events related to alarms, configuration, OAM test failures and state change notifications, to help determine the root cause. The timeline is displayed along the bottom, and event categories, such as alarms or updates, are on the left. Where a large number of events have occurred at a specific time point, the events appear as a cluster, displaying the number of contained events.

You can open the Event Timeline directly from a service object, or from individual alarm objects. View events that occurred prior to a hardware problem or an alarm being raised to determine a possible cause (for example, an object configuration change).

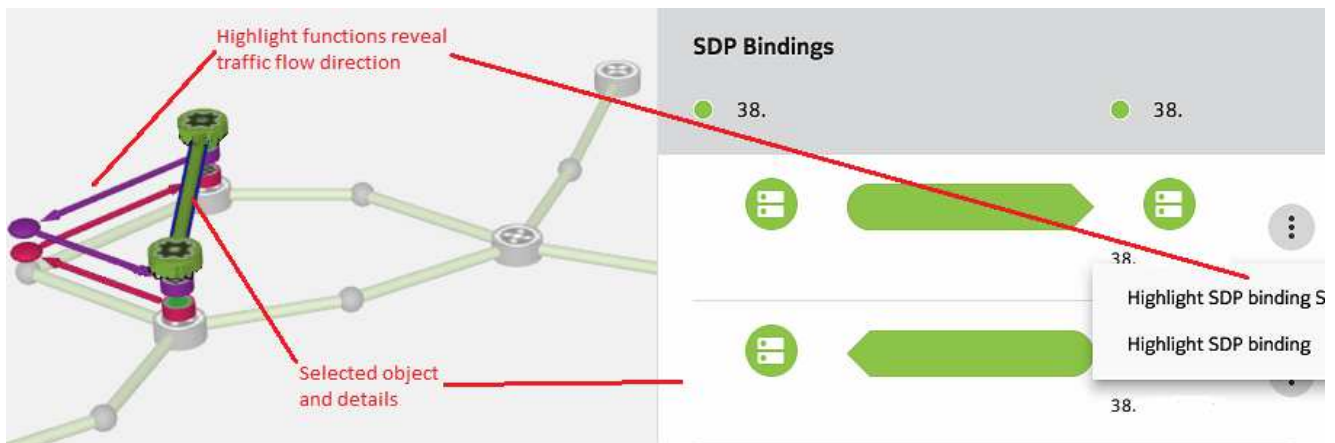


- **Set a date range:** Click **Select Date Range** and choose the start and end dates for which events will be shown.
- **Show event details:** Click on an event on the timeline and click **Event Details** to view information related to the event.
- **Zoom in on clustered events:** Click the **Zoom** buttons **+** **-** to expand or collapse event clusters.
- **Scroll along the timeline:** Click the **Move Right/Left** buttons **<** **>** to move forward and backward along the timeline.

1.23 IGP map

The IGP Map can be useful in identifying a service segment that is experiencing a failure.

Note: CPAM configuration is required in the service management application in order for the IGP Map to display.



- **View map object details:** On the IGP Map, click on an SDP binding, IGP link, or Service site object and then click **Info** ⓘ to view details about the object.
- **View only SDPs with problems:** Click on the **Map Type** menu and select **Troubled SDPs** to display only SDP bindings that are not working on the service.

1.24 How do I show SDP binding traffic flows on the IGP map?

- 1 _____
Click on an SDP binding object on the map.
- 2 _____
On the right side of the GUI, click **Info** ⓘ to view details about the SDP binding.
- 3 _____
On the Info panel, next to an SDP binding list item, click **More** ⋮ , **Highlight SDP Binding SPF** and/or **Highlight SDP Binding**.
Traffic flows appear as colored arrows, indicating traffic direction through service tunnels between SDPs.
- 4 _____
To hide traffic flows, click **View Options** ⚙ . Uncheck the traffic flow item whose color matches the traffic flow you want to hide.

END OF STEPS _____



1.25 Alarm list

The Alarm list presents all alarms against services in your network. The list can be filtered and sorted in a variety of ways to reduce the number of visible alarm messages to a manageable number. Open an alarm list from a specific service to view alarms only for that service. Open the general Alarm List view to see alarms for your entire network.

Manage the order and content of the Alarm list using the following tasks:


- **Configure an advanced filter for the Alarm List.** Click **Filter** ⚙ and select **Advanced Filter**. In the Advanced Filter form, specify a name and configure one or more filter criteria. Enable the **Public** option to make the filter available to other users, and accessible for alarm e-mail policies. Save the filter and click **Apply** to apply it immediately. A chip filter appears at the top of the list. Click **Clear Filter** ✖ to remove the filter.
- **Filter the Alarm list under a specific column.** Type a text string in the text field at the top of a column and press **Enter**, or use the date picker or drop-down menu (where available) and press **Enter**. Click **Clear Filter** ✖ to clear column filters.
- **Sort the alarm list under a specific column.** Click on a column header to sort the list under

that column. Click the column header a second time to toggle the sort order (ascending/descending), as indicated by the **Up/Down** arrow.

- **Refresh the alarm list manually.** Click **Refresh**  .
- **Configure columns.** Right-click on a column header and choose **Columns** from the menu. A list of column names appears.
Click on the names of the columns that you want to display. Click above the column headers on the list to close the column selector and refresh the view.
- **Configure column sorting.** Right-click on a column header and choose **Configure Sort** from the menu.
In the Configure Sort form, click **Add Level**  and choose the first column on which to sort, in ascending or descending order. You can continue to choose columns to sort the list under.
In the Configure Sort form, you can also copy, delete, and re-order selected entries.


1.26 How do I change supervision group KPI color thresholds?

The color of a supervision group tile object header gives you a rough idea of the number of alarm-affected services in the group. You can change the alarm count thresholds at which the colors change.

1. Click **More**  , **Group KPI Threshold Settings**.
2. In the Group KPI Threshold Settings form, use the sliding bar to set the threshold for each range that you want to apply.


1.27 How do I change trend arrow time setting?

The trend arrow that appears at the top-right corner of each supervision group matrix tile changes its appearance in the event of a KPI change within the group over the preset time frame. You can change the duration of that time frame.

1. Click **More**  , **User Preferences**.
2. In the User Preferences form, choose a trend time setting from the drop-down menu and click **Save**.


1.28 How do I change the maximum number of tiles in the Summary view?

You can change the maximum number of supervision group tile objects that appear in the Summary view to a maximum of 200 supervision groups. A larger number of groups may take longer to load onto the page.

1. Click **More**  , **User Preferences**.
2. In the User Preferences form, specify the maximum number of groups and click **Save**.


1.29 How do I change Event Timeline settings?


You can enable or disable event recording and specify the network objects you want to record events for on the timeline.

1. Click **More**  , **Timeline Settings**.
2. In the Timeline Settings form:
 - Enable or disable the **Enable Event Recording** check box.
 - Enable the check box for each object you want to record events for on the timeline.
3. Click **Save**.

1.30 How do I change map label settings?

You can change the information that appears in static labels for various map object types, or suppress map labels altogether.

 **Note:** Mouse-over map object labels always appear, regardless of these settings.

1. Click **More**  , **Map Label Settings**.
2. In the Map Label Settings form, specify the kind of information you want to appear in labels for service sites, routers, and subnets. If you select None for a specific object type, the label does not appear.
3. Click **Save**.

2 Service Supervision use cases

2.1 Routine service maintenance with Service Supervision



Purpose

This article shows you how to use the Service Supervision application to monitor the status of the services running in your network and to locate and troubleshoot problems.

Starting points for troubleshooting monitored services

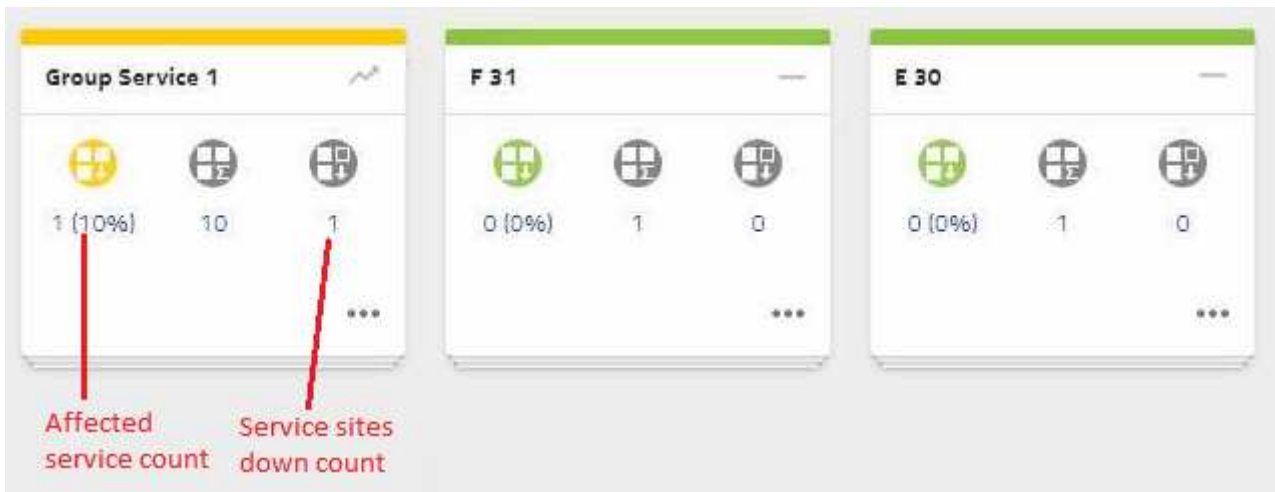
Changes to services manifest themselves through trending arrows on group tiles, and through changes to KPI icon color on service objects.

Any of the following events could indicate that you need to troubleshoot your services:

- One or more KPI icons turn red on services in the Watch view.
To add services to the Watch view, hover over a service item in the Service list and click **More**  , **Add To Watch Drawer**.
- A Trending Arrow  appears on a tile, or the tile changes color as services are impacted by new issues.
- A service item in the Service list shows problems with service objects: service site down, SAP down, SDP binding down, and/or OAM test validation failure.

Triaging steps for a group


- 1 _____
Select an affected group tile in the view.
- 2 _____
Determine the number of affected services and services with sites down for the group.



Click **More Details** ******* to expand a group tile and view additional KPIs: services with SAPs down, SDP bindings down, or OAM test failures.

3

Double-click on the group to display its affected services in the Service list.

From the Service list, you can open the Alarms list  to view alarms for the entire group.

4

Proceed to [2.1.4 "Triaging steps for services" \(p. 20\)](#).

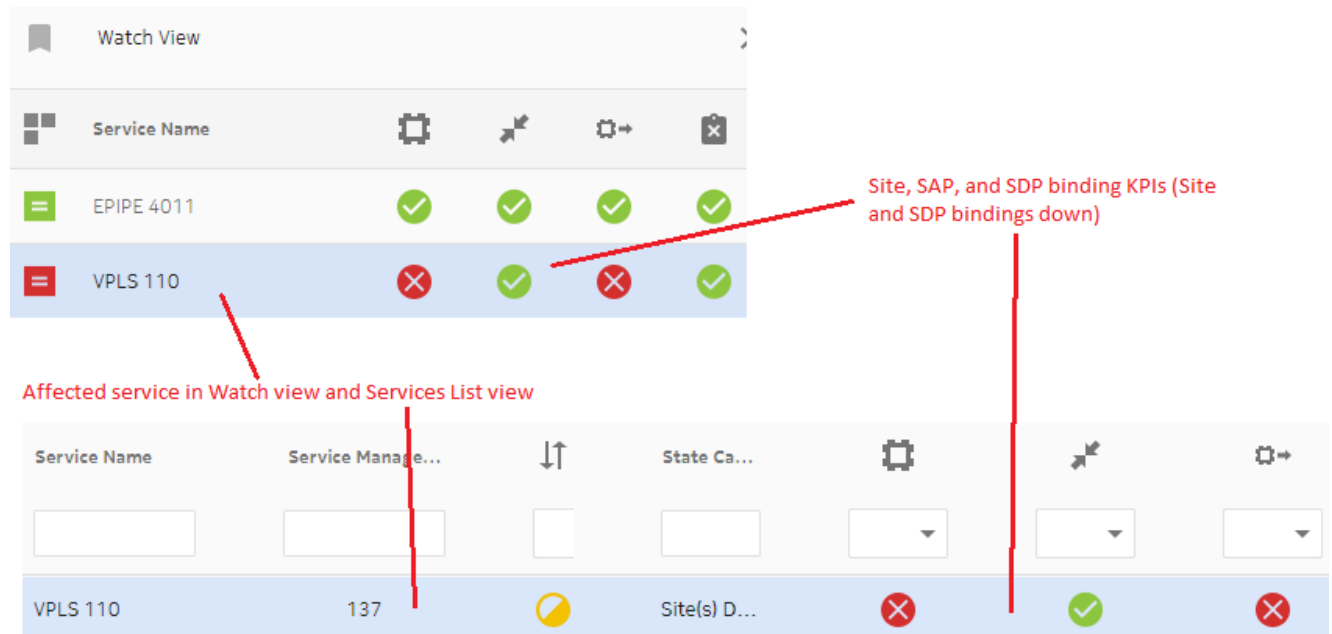
END OF STEPS

Triaging steps for services



One or more KPI icons turn red on services in the Service list or in the Watch view.

1

Double-click on an affected service in the Service list or click on an affected service in the Watch view.



The affected service opens in the Service list as a list of service sites.

- 2 _____
- Determine which KPIs are affected (i.e. down ✗): service site down, SAP down, SDP binding down, and/or OAM test validation failure.
- 3 _____
- Open the Alarms list for the affected service; on the service item click **More, Alarms**. Use the Alarms List, Impacts diagram, and Event Timeline as described in [2.1.8 “Troubleshoot problems in the Alarms list” \(p. 23\)](#) and [2.1.9 “Troubleshoot problems in the Event Timeline” \(p. 24\)](#) to view events that might point to the problem.
- 4 _____
- On the service item, click **IGP Map** . On the IGP map, check the status of SDP bindings as described in [2.1.11 “Troubleshoot problems in the IGP Map” \(p. 26\)](#).
- 5 _____
- To change the configuration of the service item in its management application, hover over a service item and click **More** , **View Properties**. Monitor the object in Service Supervision to determine if KPIs improve as a result of the change.

6

After troubleshooting, verify that all alarms and KPIs have cleared and run OAM tests to prove that traffic can flow.

END OF STEPS


Triaging steps for a service site

For a selected service item in the Service list, the Service Site  KPI is Down.

1

Double-click on the service item to drill down to a list of all sites for the service.

2

Open the Alarms list for the affected service site; on the site item, click **More**  , **Alarms**.


3

Use the Alarms List and Impacts diagram as described in [2.1.8 “Troubleshoot problems in the Alarms list” \(p. 23\)](#) to view events that might point to the problem.

4

On the service item, click **Event Timeline**  . Use the Event Timeline as described in [2.1.9 “Troubleshoot problems in the Event Timeline” \(p. 24\)](#) to view events that might point to the problem.

5

Select multiple affected service site item(s) and click **OAM Test**  . Perform OAM tests as described in [2.1.10 “Troubleshoot problems with OAM tests” \(p. 25\)](#) .

END OF STEPS


Triaging steps for a SAP

For a selected service item in the Service list, the SAP  KPI is Down.

1

On the service item, click on the SAP icon to drill down to a list of SAPs on the service.


2

On an affected SAP item, click **Alarms**  . Use the Alarms List and Impacts diagram as described in [2.1.8 “Troubleshoot problems in the Alarms list” \(p. 23\)](#) to view events that might point to the problem.

3

On an affected SAP item, click **Event Timeline**  . Use the Event Timeline as described in [2.1.9 “Troubleshoot problems in the Event Timeline” \(p. 24\)](#) to view events that might point to the problem.

4

Select multiple affected SAP item(s) and click **OAM Test**  . Perform OAM tests as described in [2.1.10 “Troubleshoot problems with OAM tests” \(p. 25\)](#) .

END OF STEPS


Triaging steps for an SDP binding

For a selected service item in the Service list, the SDP Binding  KPI is Down.


1

On the service item, click the SDP Binding icon to drill down to a list of SDP bindings on the service.


2

On an affected SDP binding item, click **Alarms**  . Use the Alarms List and Impacts diagram as described in [2.1.8 “Troubleshoot problems in the Alarms list” \(p. 23\)](#) to view events that might point to the problem.

3

On an affected SDP binding item, click **Event Timeline**  . Use the Event Timeline as described in [2.1.9 “Troubleshoot problems in the Event Timeline” \(p. 24\)](#) to view events that might point to the problem.

4


Select one or more affected SDP binding item(s) and click **OAM Test**  . Perform OAM tests as described in [2.1.10 “Troubleshoot problems with OAM tests” \(p. 25\)](#) .

END OF STEPS


Troubleshoot problems in the Alarms list

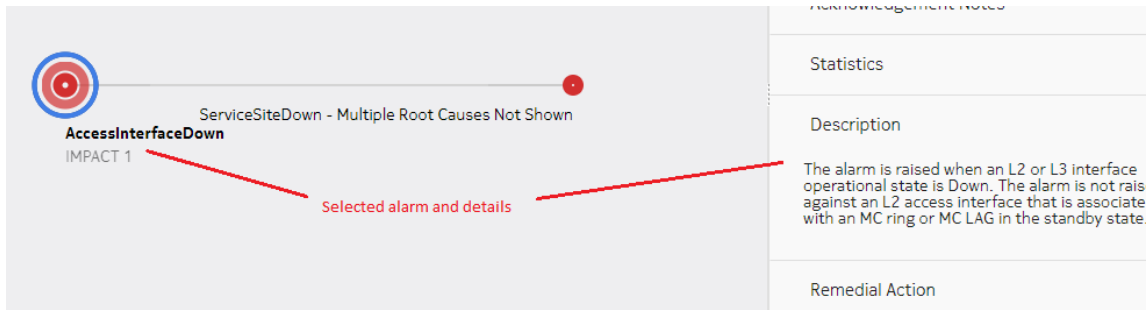
Click on an alarm message in the list to display complete details of the alarm, including descriptive and remedial information.


If you suspect that the affected object for the selected alarm is a cause of the current problem, you can open the affected object in its management application directly from the Alarms list. On the



selected alarm item, click More  → Show Affected Object. Make configuration changes to the affected object while monitoring the object in Service Supervision to determine if KPIs improve as a result of the change.

From the Alarms list (in the context of the selected service) you can take the following actions:

- For an alarm item in the list, click **Show Impacts**  to determine the root cause of the alarm.
- The selected alarm object is circled in dark blue. Click on an alarm object to view details and remedial information.





If you suspect that the affected object for the selected alarm is a cause of the current problem, you can open the affected object in its management application from the Impact Analysis view. At the bottom of the Details panel, click **Show Affected Object** . Make configuration changes to the affected object while monitoring the object in Service Supervision to determine if KPIs improve as a result of the change.

- Open the Event Timeline  for the alarm.
Set a date range  around the alarm event and view events that occurred prior to alarm being raised to determine a possible cause (for example, an object configuration change).

Troubleshoot problems in the Event Timeline

You can open the Event Timeline directly from a service object, or from individual alarm objects. View events that occurred prior to a hardware problem or an alarm being raised to determine a possible cause (for example, an object configuration change).

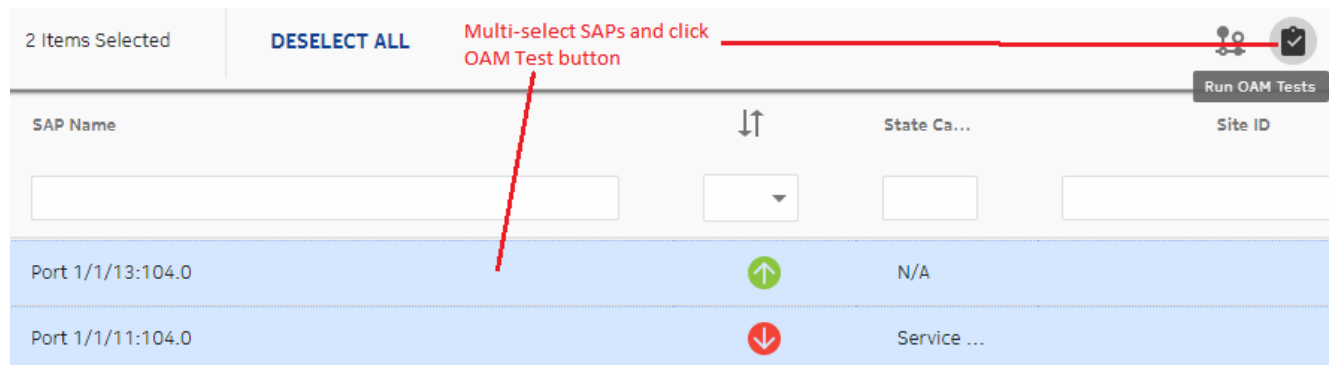
- Set an appropriate date range  around the hardware problem or alarm event.
- Select an event icon in the timeline and click **Event Details**  to view information related to the event. Use the Zoom function to expand clusters of events and search for causal events for a

failure.



Troubleshoot problems with OAM tests

OAM diagnostic tests allow on-demand service performance monitoring and SLA verification to ensure that a service meets its performance settings in a controlled test time.



OAM tests can be run on a service by multi-selecting service sites, SAPs, or SDP bindings. A failed OAM test result generally indicates that the service or part of the service is not operational. Not all OAM test types apply to all service types.

Select a test type and click **Run Test**. The results are displayed in the Test Results Summary.

← VPLS 104 - OAM Test Set

Status	Test Type	CFM Level	Executed	E:
Failed Result	CFM Loop Back	Level 7	2	

Test Type
CFM Loop Back

CFM Level
Level 7

Test Execution Statistics

0% (0) Succeeded

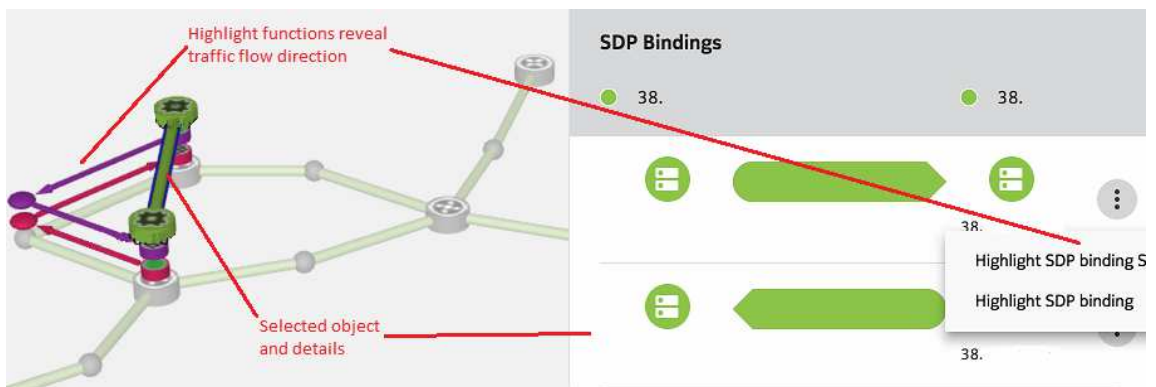
100% (2) Failed

Troubleshoot problems in the IGP Map

Note: CPAM configuration is required in the service management application in order for the IGP Map to display.

From the Service list, you can open a selected service in the IGP Map . The IGP Map can be useful in identifying the service segment that is experiencing a failure.

- In the IGP Map, click on an SDP binding, IGP link, or Service site object and then click **Info** to view details about the object.



- Set the **Map Type** parameter to Troubled SDPs to display only SDP bindings that are not working on the service.

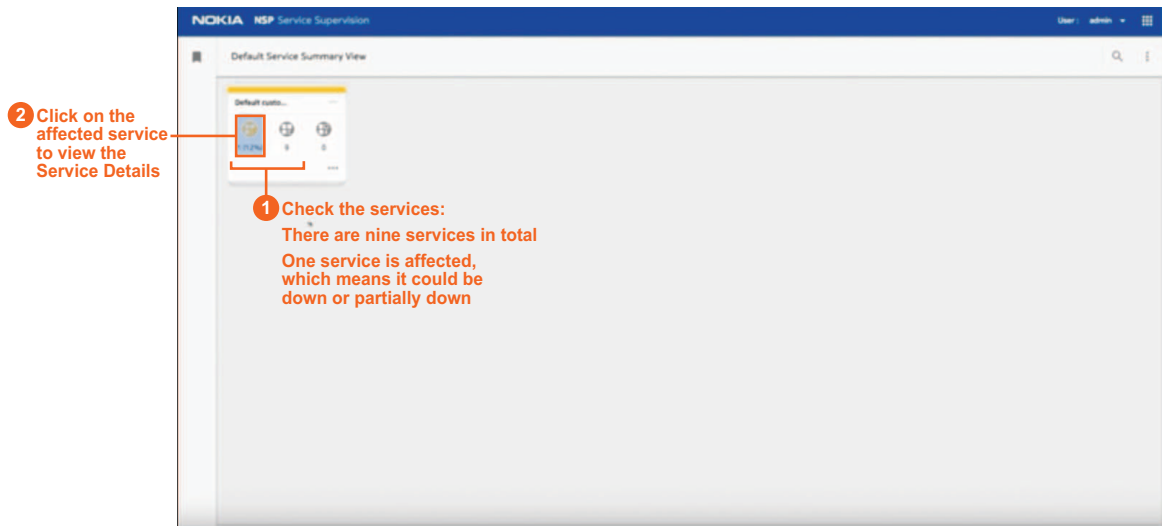
2.2 Fault Identification in Service Supervision

This article shows how to use the Service Supervision application to identify faults and reduce time to resolve those faults, including using the Event Timeline to troubleshoot issues.

Let's go

A service is partially down.

In the Service Summary view, we see that there are nine services. One is affected, which means it could be down or partially down.



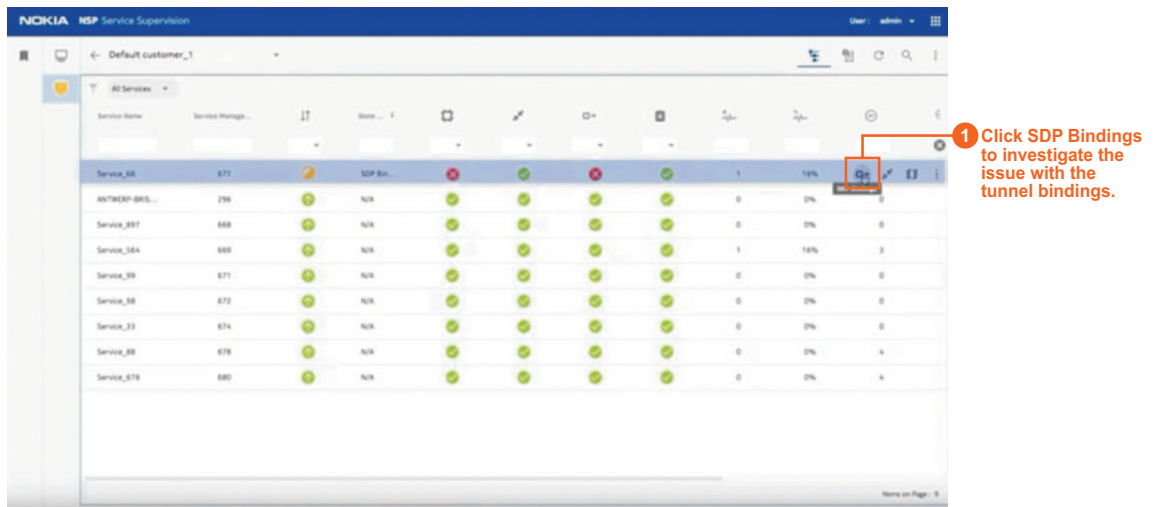
29347

Let's view the Service Details. We see that one or more sites are down, access ports are functioning correctly, and one or more tunnel bindings are down. This suggests that the problem is in the internal network.



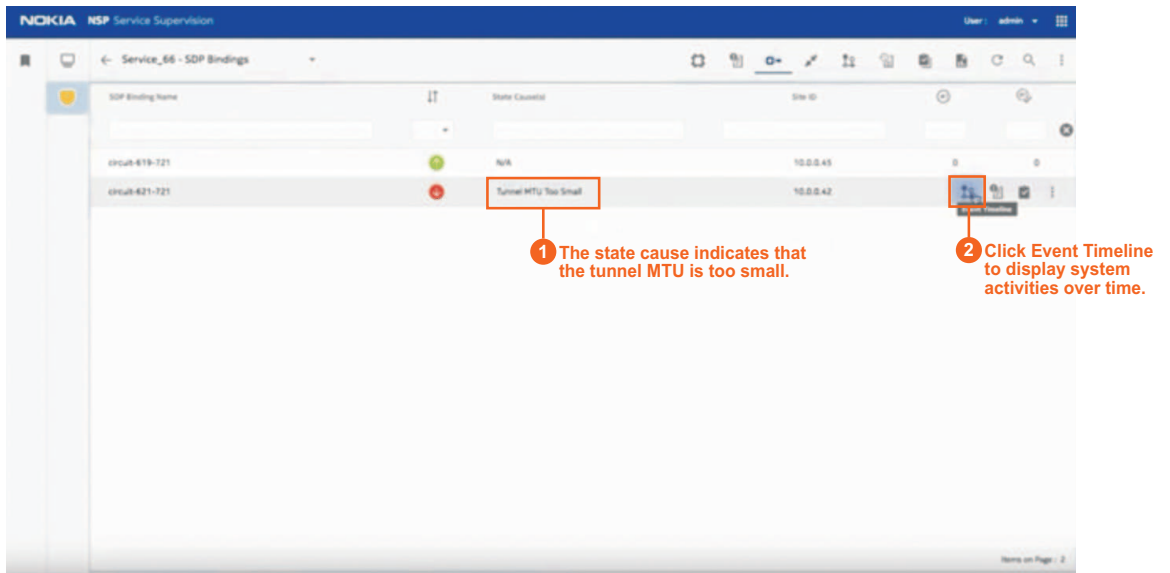
29369

Let's look at the other services. Only Service 66 is affected. We'll investigate the tunnel binding issue.



29351

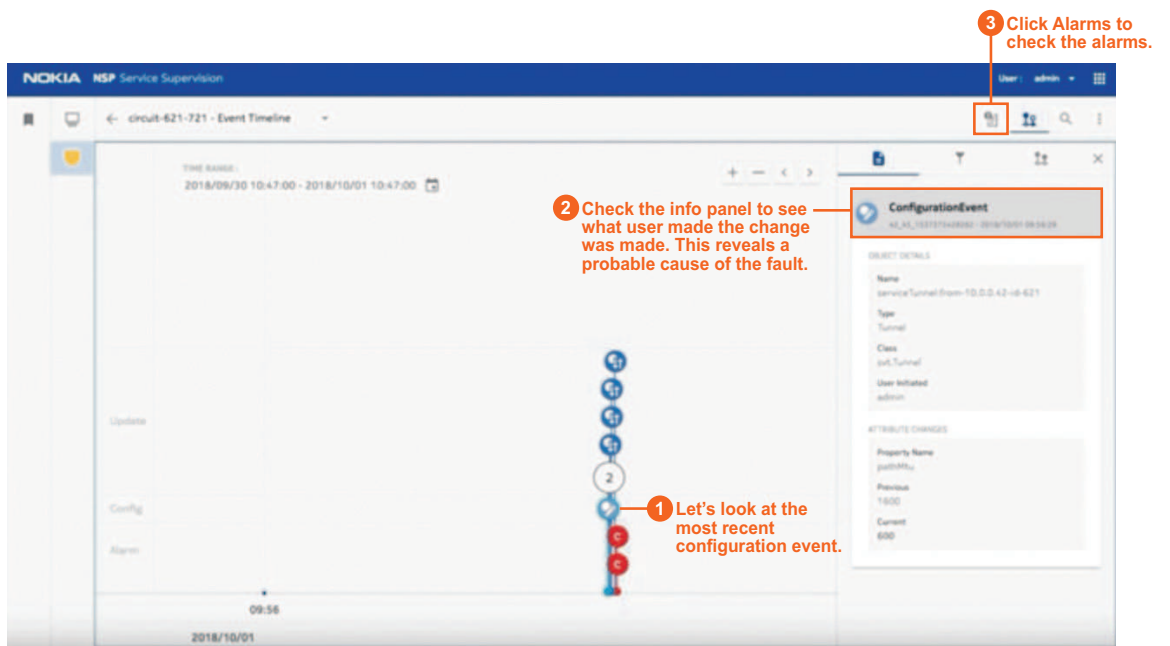
The state cause indicates that the tunnel MTU is too small. The Event Timeline will provide more detail.



29368

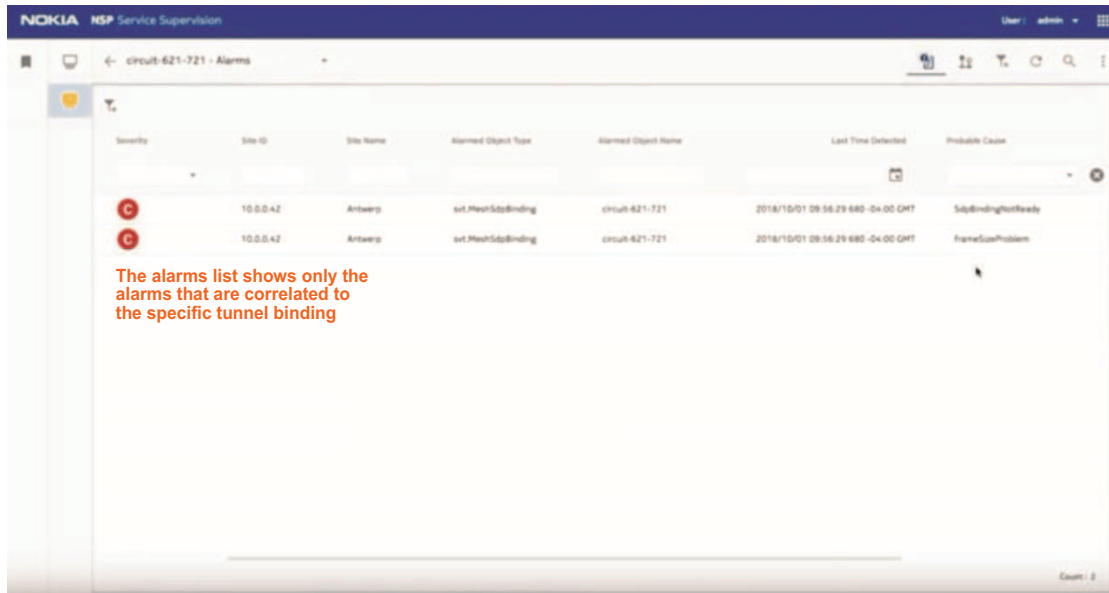
The Event Timeline displays system activities over a period of time.

Let's check the most recent configuration change. The info panel shows which user made the change and what change was made. This information reveals a probable cause of the fault.



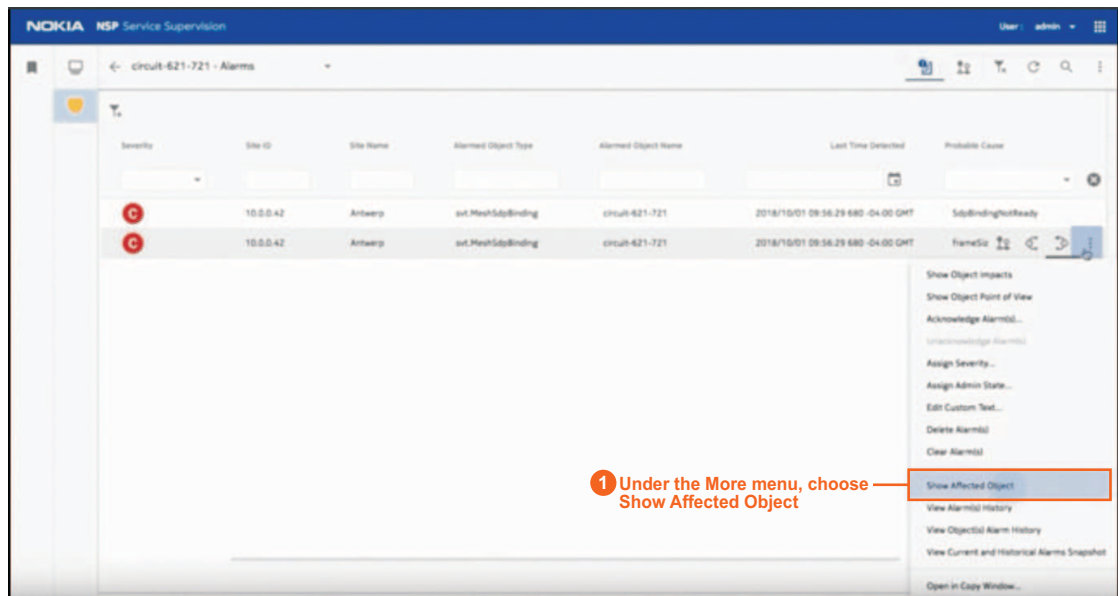
29364

Before fixing the issue, let's check the alarms. The list shows only the alarms that are correlated to this specific tunnel binding.



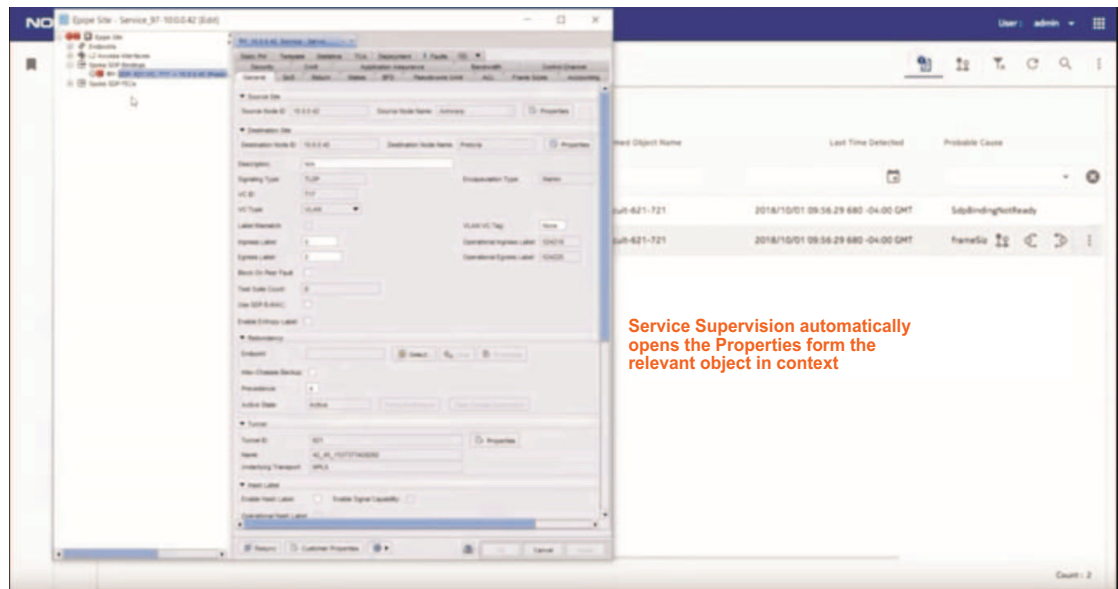
29349

Let's fix the problem. Under the **More** menu, choose **Show Affected Object**.



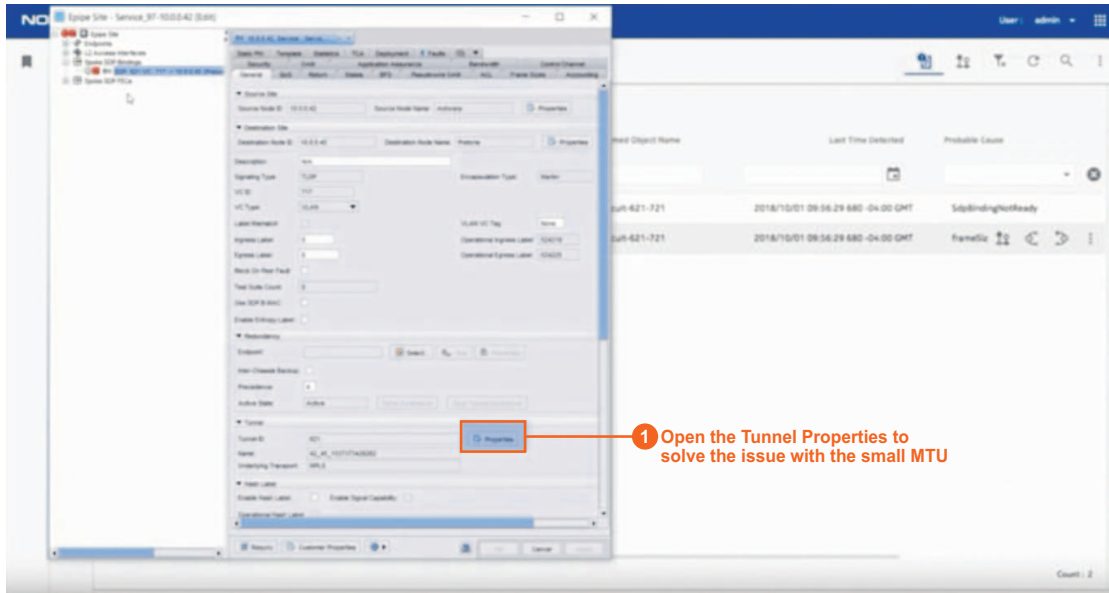
29350

Service Supervision automatically opens the property form of the relevant object here in context. It is not necessary to open the NFM-P application separately to find the object.



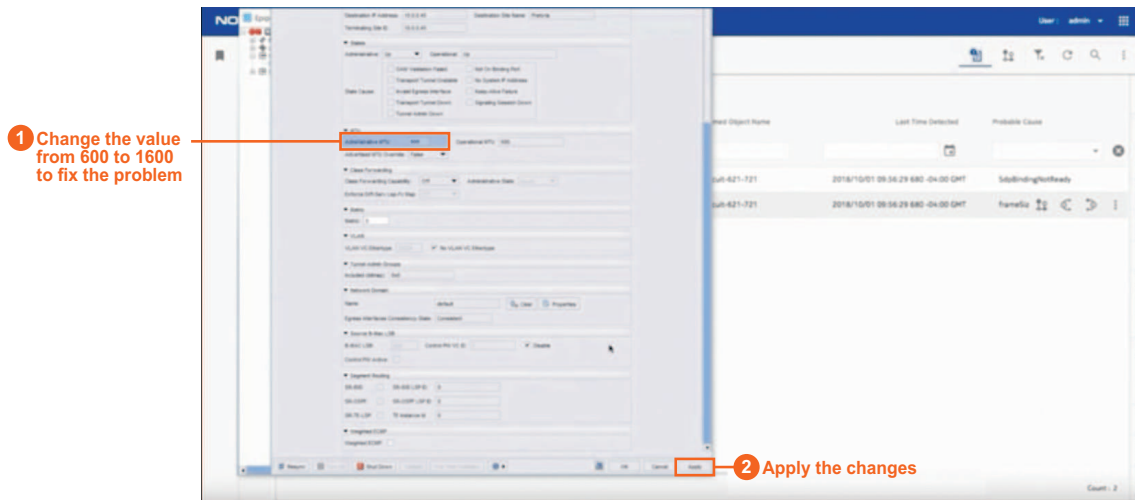
29367

In this case, in order to solve the issue with the small tunnel MTU, we open the Tunnel Properties.



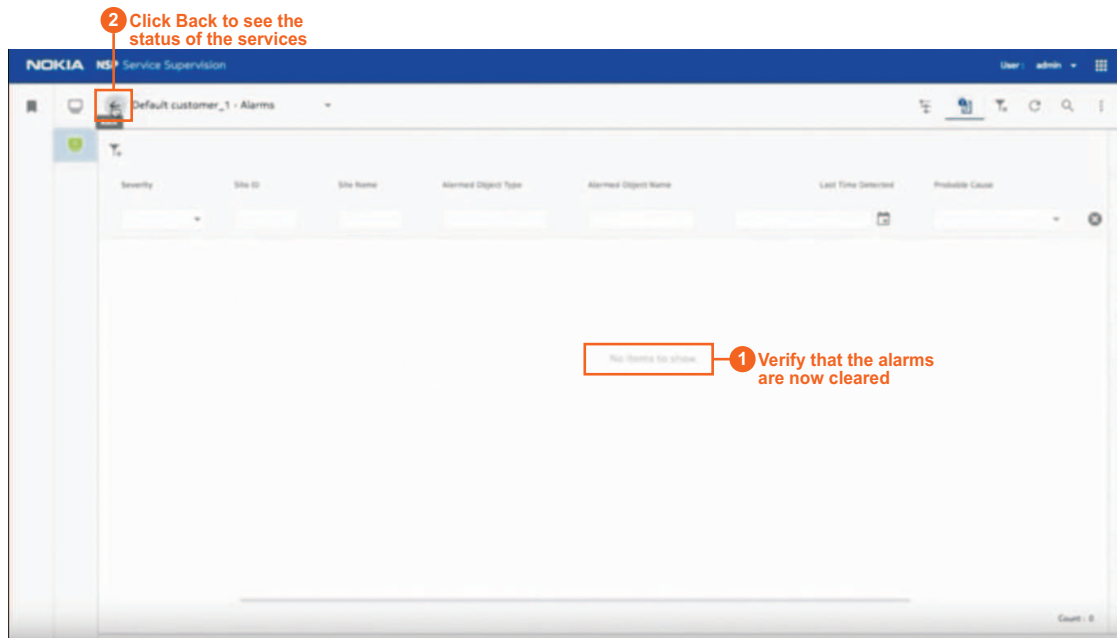
29366

Change the value from 600 to 1600 to correct the problem, and apply the changes.



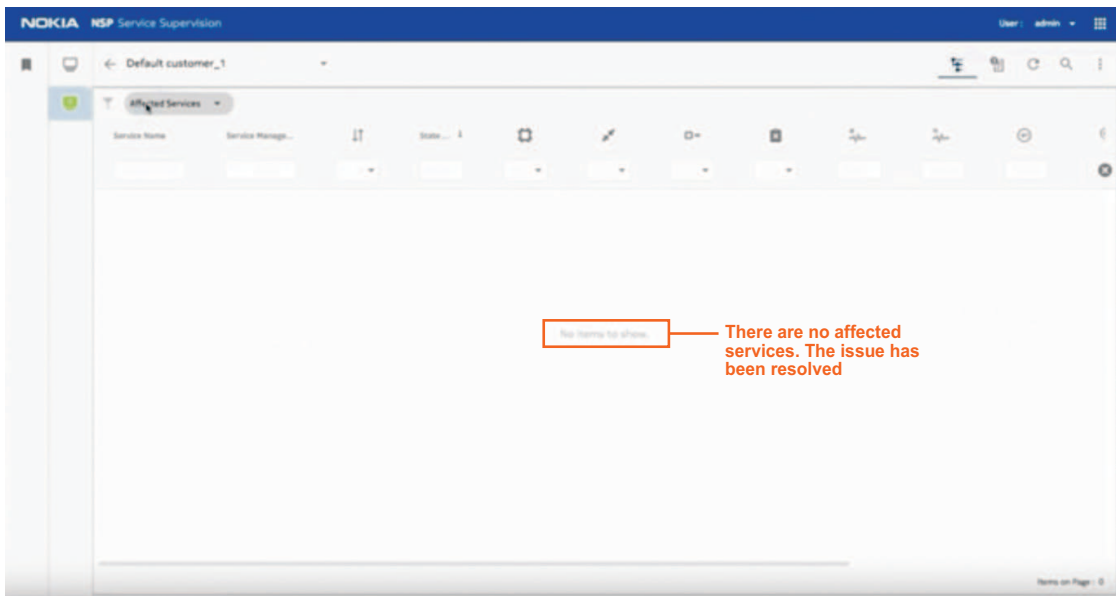
29374

The correction has cleared the alarms. Let's check the status of the service.



29365

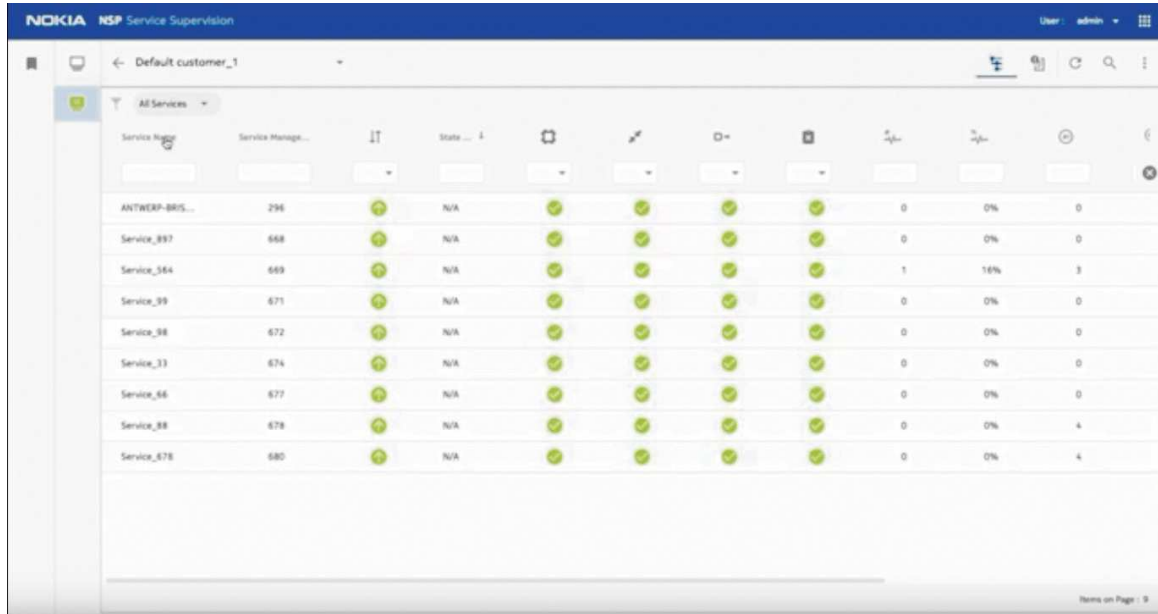
There are no affected services. The issue has been resolved.



29348

We're done

Let's check all the services.



The screenshot shows the NOKIA NSP Service Supervision interface. The top navigation bar includes the NOKIA logo, 'NSP Service Supervision', and a user profile 'User: admin'. Below the navigation bar, there is a breadcrumb trail 'Default customer_1' and a search icon. The main content area displays a table of services under the heading 'All Services'. The table has columns for Service Name, Service Manager, State, and various performance metrics. All services listed are in a 'Healthy' state, indicated by green checkmarks.

Service Name	Service Manager	State	...	...	...	...	...	...	...	...
ANTWERP-BRIS...	296	Healthy	N/A	...	...	...	...	0	0%	0
Service_897	668	Healthy	N/A	...	...	...	...	0	0%	0
Service_364	669	Healthy	N/A	...	...	...	...	1	16%	3
Service_99	671	Healthy	N/A	...	...	...	...	0	0%	0
Service_98	672	Healthy	N/A	...	...	...	...	0	0%	0
Service_33	674	Healthy	N/A	...	...	...	...	0	0%	0
Service_66	677	Healthy	N/A	...	...	...	...	0	0%	0
Service_98	678	Healthy	N/A	...	...	...	...	0	0%	4
Service_678	680	Healthy	N/A	...	...	...	...	0	0%	4

All services are healthy.

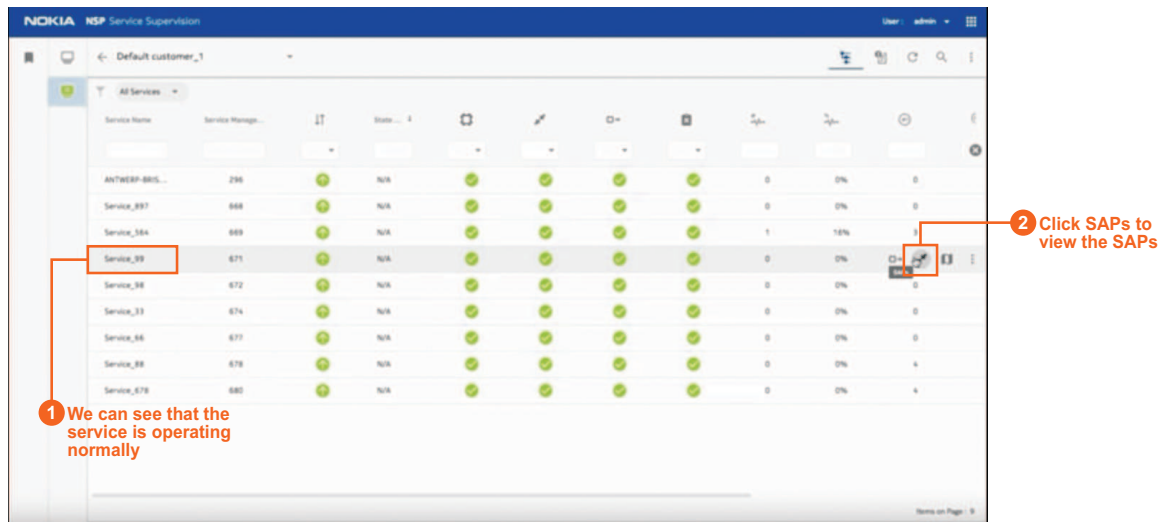
2.3 OAM testing in Service Supervision

This article shows how to use the Service Supervision application to run performance tests using OAM testing.

Let's go

A customer has complained about the performance of a service.

Let's check on the status of the services. In this situation, the customer's service is Service_99.

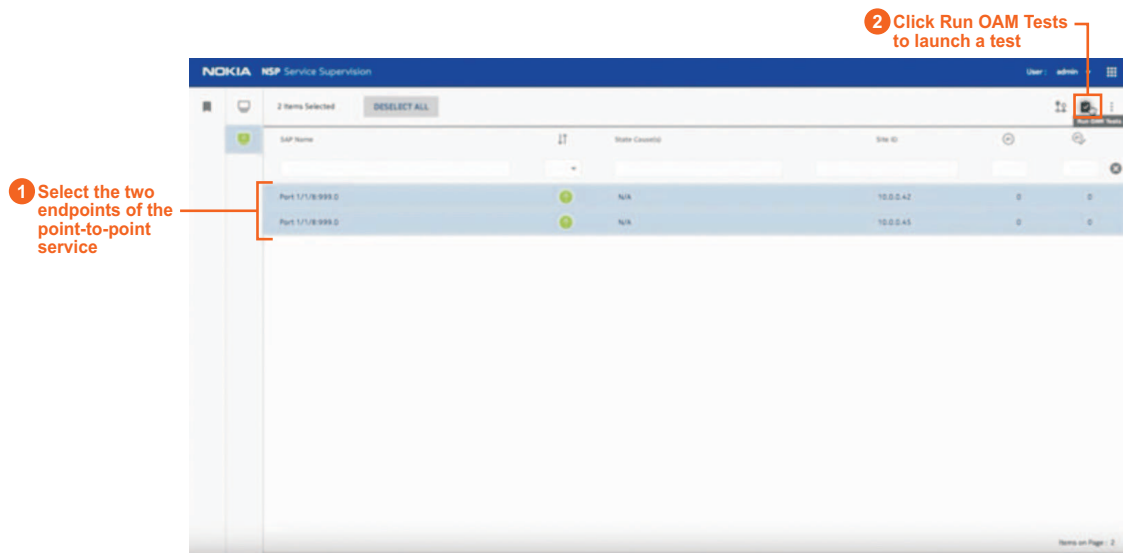


29363

The service seems to be operating normally, so let's do an OAM test. The Service Supervision application can invoke OAM tests quickly to simplify the troubleshooting process.

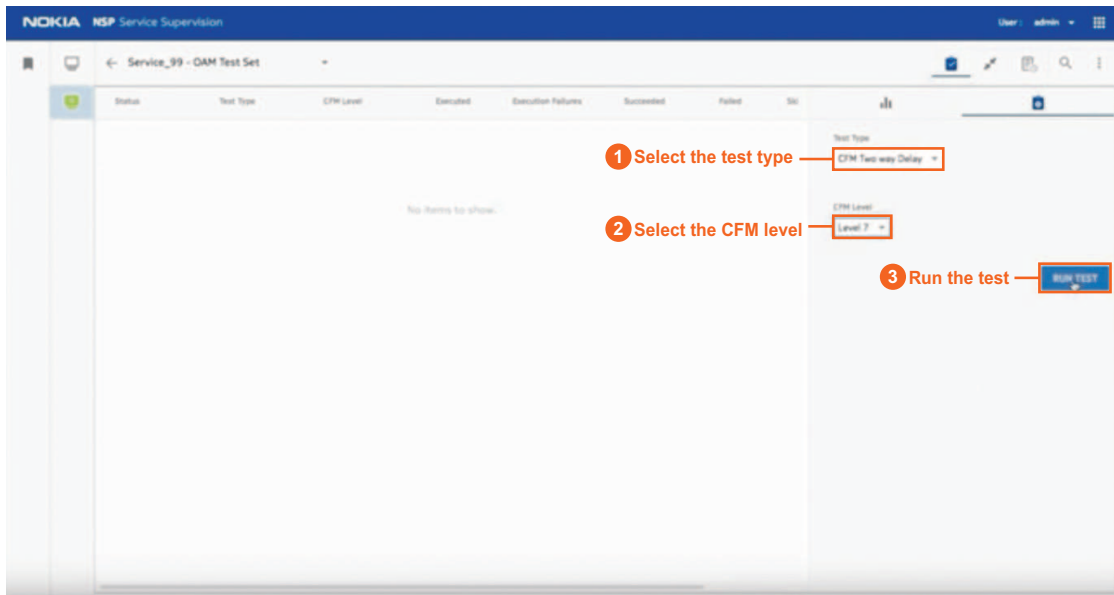
First, let's view the SAPs.

The service in question is a point-to-point service. Let's select the two endpoints and run an OAM test.



29375

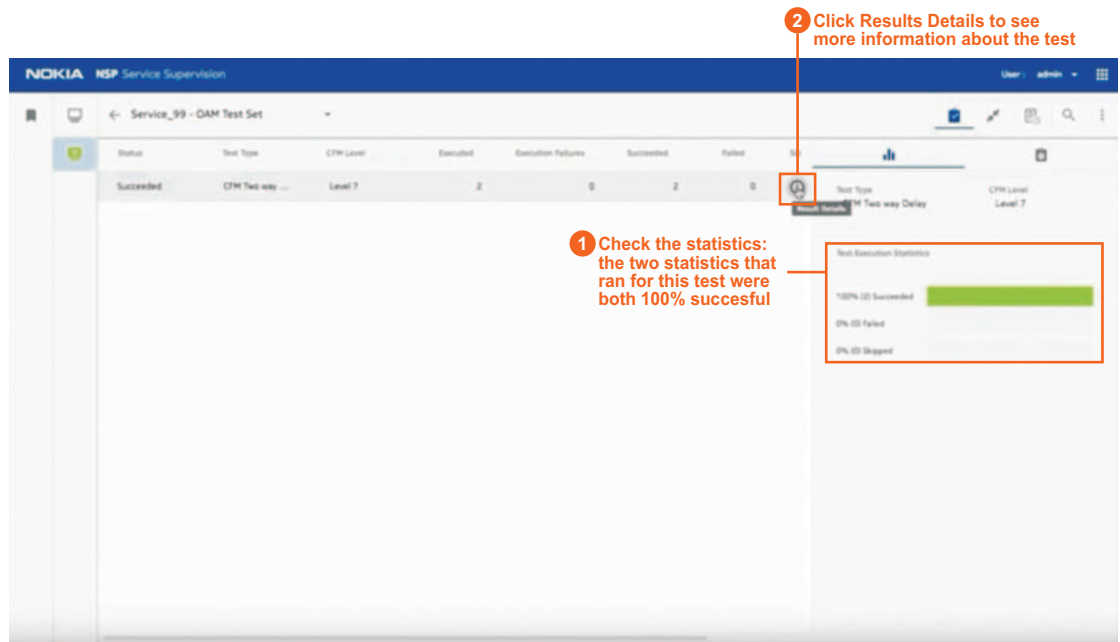
Here's the list of OAM tests that can be run. Select the test type and CFM level, then run the test.



29371

Service Supervision uses the underlying NSP to configure the actual test with the network elements. The OAM test tasks run on the network elements, then the results are published here in Service Supervision.

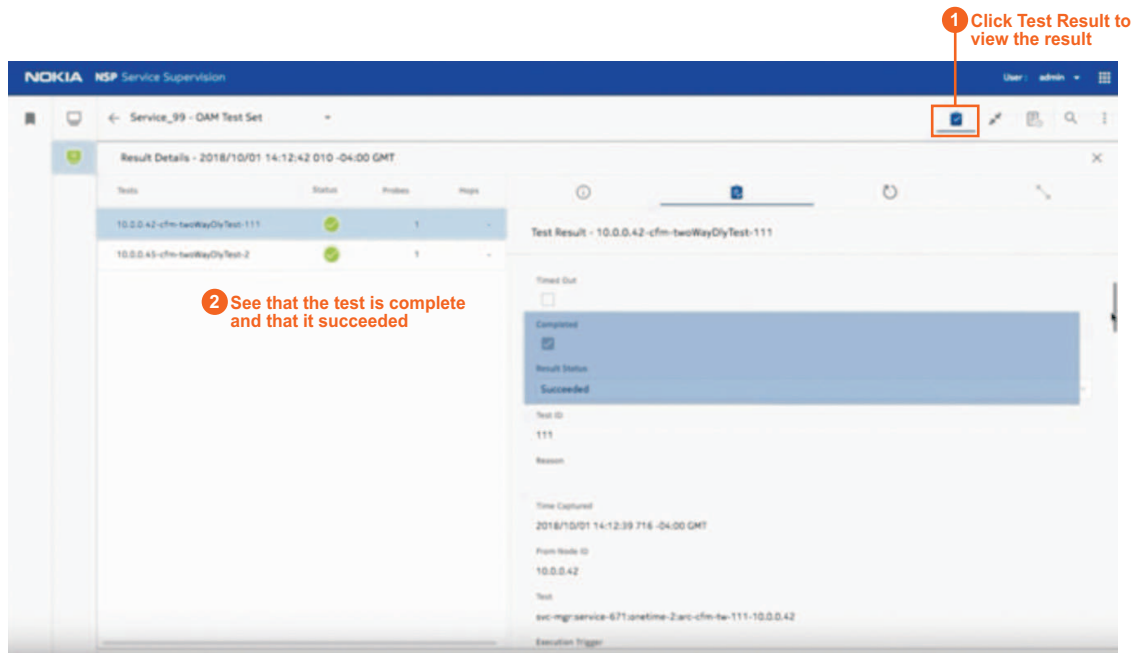
Two tasks ran for this test, and both tasks were 100% successful.



29372

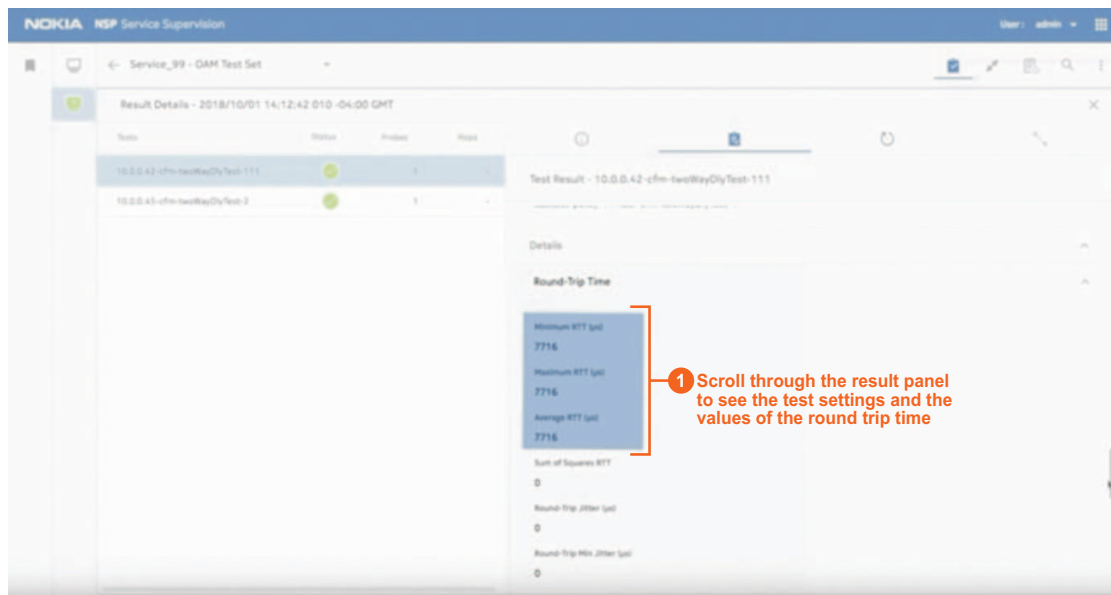
Let's view more information about the test. From the Result Details page, we can scroll through the test result.

We can see that the test is complete and that it succeeded.



29370

We can see the test settings and the values of the round-trip time.



29373

We can compare these values to the SLA for this customer to determine if the round trip time is acceptable for this service.

If necessary, network optimization can be done with other NSP applications to bring the performance of the network within the required values.

Every time we invoke an OAM test, the results are stored for later examination, if desired.

