HP NNM iSPI for IP Telephony

For the Windows ® and Linux operating systems

Software Version: 10.00

Online Help for Avaya IP Telephony Reports

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Contents

Avaya IP Telephony Call Termination Types Reports

The NNM iSPI for IP Telephony provides you the **Avaya IPT Call Terms Types** extension pack to view and analyze the performance data of the Avaya IP telephony environment. You can use this extension pack to generate reports for the call types and the call termination reasons in the Avaya IP telephony environment—based on the metrics such as period length and duration. You can use these reports to identify the trends of the call termination reasons and the call termination types on the Avaya IP telephony network during a specific time frame.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

Prerequisites for Viewing the Avaya IP Telephony Call Types and Termination Reasons Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony Call Termination Types reporting:

1. Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the iSPI for IP Telephony.

2. Enable Avaya CDR reporting in the NNM iSPI for IP Telephony.

3. Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT Calls Terms Types extension pack.

Accessing the Avaya IP Telephony Call Types and Termination Reasons Reports

To access the Avaya IP Telephony Call Types and Termination Reasons Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_Calls_Terms_Types** > **Termination_Reasons_ and_Types_Avaya**. The list of reports that you can launch using this extension pack is displayed.

Calendar Report

The **Calendar** report uses a traditional, calendar-style layout to show hourly statistics for two call metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month. You can select the **Until Now** option from the **Time Range** drop-down list to see the call data for the past 70 days, based on the duration for which the NNM iSPI for IP Telephony has been processing the CDR data and sharing this data with the NPS.

For example, if you want to analyze the call duration and call volume based on the type of calls, you can select **Call Duration (secs) (avg)** and **Sample Count (sum)** as the primary and secondary metrics and select the required values for the **Call Classification** call attribute from the Topology Filters page.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help:*

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic*.*

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected call metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

For example, if you select the **Sample Count** as the primary metric, the **Call Duration (avg)** as the secondary metric, generate the report, and then select the **Display Grain** as one hour, you can analyze the trend for the Hourly Call Attempts (HCA) and the Busy Hour Call Attempts (BHCA) along with the average duration for every hour.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

> **Note:** You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected call metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. Based on your requirement, you can select a metric for which you want to see the value range across a specified time frame. The minimum time range for this report is 24 hours. To change the call metric to sample count, select the **Sample Count (sum)** metric from the **Metric**: drop-down list after clicking **Options**.

For example, if you want to identify the hour of the month, week, or day when the number of call attempts were the highest, you can select the **Sample Count** as the metric and set the time control options to the default values for this report as discussed in the previous paragraph and then generate the report. You can move the mouse pointer on a cell in the table of the report to see the raw value of the call metric for the specific hour.

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

Sample Use Case

Use the Heat Chart report to identify the gradual shift in the range of values for a call metric. For example, if you select the call count (**Sample Count (sum)**) metric to generate the Heat Chart report, you can use the report to identify the following instances on your IP Telephony network:

- Spot an isolated instance (when the metric value was high) such as the BHCA (Busy Hour Call Attempts) that affected the results for one day.

- Spot day-of-the-week patterns.

- Verify that a high call volume or call duration condition returned to normal after a period of time.

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** report compares the variation in the call metric values for two different (consecutive) time periods for specified grouping of call attributes and ranks these groups of call attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the call metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select a call metric, specify the call attribute to group by, select the topology filter to scope the report only for certain call attribute values, and specify the time range before generating the report.

For example, if you want to analyze the overall call volume variation for all the communication managers in your deployment environment over a specified time frame, click the **Options** link and select the **Communications Manager IP Address** call attribute from the **Grouping By** drop-down list and select the **Sample Count (sum)** call metric from the **Metric:** drop-down list. You can select an appropriate time frame over which the call volume variation must be analyzed.

By default, this report groups data by the Communications Manager IP Address call attribute.

> **Note:** You can select multiple metrics by clicking (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the call
>
> attributes. You can remove the additional attribute drop-down lists displayed by clicking (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report, by default, displays the top 10 calls based on the **Call Duration (secs) (avg)** metric. You can generate this report for an hour, a day, or a week to analyze the call duration for all the calls on your network. You can select the number of calls you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the call attributes and the call metric, the **Top N** report ranks the call attribute values in the ascending or descending order of the total raw values of the call metric. This report includes all the calls that had a variation for the specified call attribute. The report displays the rank of the call attribute value along with the call metric value and the percentage of the call metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the call attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the call attributes that exhibit unusual occurrence levels in the calls.

For example, if you want to identify the Top N termination reasons for the call, you can specify the **Sample Count (sum)** as the call metric and select the call attribute **Termination Reason** in the **Grouping By** drop-down list.

This report defaults to the following parameters:

- All calls

- Metric for ranking: **Sample Count (sum)**

- Top/Bottom N: **Top 10**

- Grouping By call attribute: **Communication Manager IP Address**

Note: You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

> **Tips:**
>
> - Check this report once a day to see which network attribute might need special attention.
>
> - Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Avaya IP Telephony CDR Collection Reports

The NNM iSPI for IP Telephony provides you the **Avaya IPT CDR Collection** extension pack to view and analyze the performance data of the Avaya IP telephony environment. You can use this extension pack to generate reports for the call details record in the Avaya IP telephony environment—based on the metrics such as call count (Sample Count) and call duration. You can use the different report formats to view specific metric details across a range of time frames and perform a trend analysis to assist you better in taking decisions for your Avaya IP Telephony infrastructure.

You can use this extension pack to report on the multiple dimensions (attributes) of a call. The extension pack retains the data in the Network Performance Server (NPS) for a short period of time (32 days). You can use the data for short-term operational reporting and run the reports once a month. You can use the reports for further analysis using custom tools.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Recent Calls

- Top N

- Top N Chart

- Top N Table

Prerequisites for Viewing the Avaya IP Telephony CDR Collection Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony CDR Collection reporting:

1. Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the NNM iSPI for IP Telephony.

2. Enable the Avaya CDR reporting in the NNM iSPI for IP Telephony.

3. Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT CDR Collection extension pack.

Accessing the Avaya IP Telephony CDR Collection Reports

To access the Avaya IP Telephony CDR Collection Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_CDR_Collection** > **Call_Details**. The list of reports that you can launch using this extension pack is displayed.

Calendar Report

The **Calendar** report uses a traditional, calendar-style layout to show hourly statistics for two call metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month. You can select the **Until Now** option from the **Time Range** drop-down list to see the call data for the past 70 days, based on the duration for which the NNM iSPI for IP Telephony has been processing the CDR data and sharing this data with the NPS.

For example, if you want to analyze the call duration and call volume based on the type of calls, you can select **Call Duration (secs) (avg)** and **Sample Count (sum)** as the primary and secondary metrics and select the required values for the **Call Classification** call attribute from the Topology Filters page.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Options

- Run Prompts

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected call metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

For example, if you select the **Sample Count** as the primary metric, the **Call Duration (avg)** as the secondary metric, generate the report, and then select the **Display Grain** as one hour, you can analyze the trend for the Hourly Call Attempts (HCA) and the Busy Hour Call Attempts (BHCA) along with the average duration for every hour.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

> **Note:** You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected call metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. Based on your requirement, you can select a metric for which you want to see the value range across a specified time frame. By default, the Heat Chart report displays the data for all calls from the last 31 days, for all days of the week, for all hours of the day, the **Call Duration (secs) (avg)** as the call metric, and with no topology filter selected. The minimum time range for this report is 24 hours. To change the call metric to sample count, select the **Sample Count (sum)** metric from the **Metric:** drop-down list after clicking the **Options**link.

For example, if you want to identify the hour of the month, week, or day when the number of call attempts were the highest, you can select the **Sample Count** as the metric and set the time control options to the default values for this report as discussed in the previous paragraph and then generate the report. You can move the mouse pointer on a cell in the table of the report to see the raw value of the call metric for the specific hour.

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

Sample Use Case

Use the Heat Chart report to identify the gradual shift in the range of values for a call metric. For example, if you select the call count (**Sample Count (sum)**) metric to generate the Heat Chart report, you can use the report to identify the following instances on your IP Telephony network:

- Spot an isolated instance (when the metric value was high) such as the BHCA (Busy Hour Call Attempts) that affected the results for one day.

- Spot day-of-the-week patterns.

- Verify that a high call volume or call duration condition returned to normal after a period of time.

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** report compares the variation in the call metric values for two different (consecutive) time periods for specified grouping of call attributes and ranks these groups of call attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the call metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select a call metric, specify the call attribute to group by, select the topology filter to scope the report only for certain call attribute values, and specify the time range before generating the report.

For example, if you want to analyze the overall call volume variation for all the communication managers in your deployment environment over a specified time frame, click the **Options** link and select the **Communications Manager IP Address** call attribute from the **Grouping By** drop-down list and select the **Sample Count (sum)** call metric from the **Metric:** drop-down list. You can select an appropriate time frame over which the call volume variation must be analyzed.

By default, this report groups data by the Communications Manager IP Address call attribute.

> **Note:** You can select multiple metrics by clicking [icon] (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the call attributes. You can remove the additional attribute drop-down lists displayed by clicking [icon] (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report, by default, displays the top 10 calls based on the **Call Duration (secs) (avg)** metric. You can generate this report for an hour, a day, or a week to analyze the call duration for all the calls on your network. You can select the number of calls you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Recent Calls Report

The **Recent Calls** report, by default, displays two of the most recent calls on the network.You can select the number of calls you want the report to display from the options provided by the report template.

The controls that appear on the **Recent Calls** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the call attributes and the call metric, the **Top N** report ranks the call attribute values in the ascending or descending order of the total raw values of the call metric. This report includes all the calls that had a variation for the specified call attribute. The report displays the rank of the call attribute value along with the call metric value and the percentage of the call

metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the call attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the call attributes that exhibit unusual occurrence levels in the calls.

For example, if you want to identify the Top N termination reasons for the call, you can specify the **Sample Count (sum)** as the call metric and select the call attribute **Termination Reason** in the **Grouping By** drop-down list.

This report defaults to the following parameters:

- All calls

- Metric for ranking: **Sample Count (sum)**

- Top/Bottom N: **Top 10**

- Grouping By call attribute: **Communication Manager IP Address**

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can

select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

Tips:

- Check this report once a day to see which network attribute might need special attention.

- Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Avaya IP Telephony Media Gateway Calls Reports

The NNM iSPI for IP Telephony provides you the **Avaya IPT MGW Calls** extension pack to view and analyze the performance data of the Avaya IP telephony environment. You can use this extension pack to generate reports for the calls handled by the media gateway. You can generate reports based on the gateway call attributes such as the Communication Manager IP Address, the Direction, the media gateway, the port network number and so on.

The extension pack retains the detailed data in the Network Performance Server (NPS) for a period of 14 days and retains the summary data for a period of 70 days.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

Prerequisites for Viewing the Avaya IP Telephony Media Gateway Calls Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony Media Gateway Calls reporting:

1. Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the iSPI for IP Telephony.

2. Configure the NNM iSPI for IP Telephony to enable CDR data collection from the Avaya Communications Manager.

3. Enable Avaya reporting in the NNM iSPI for IP Telephony.

4. Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT MGW Calls extension pack.

Accessing the Avaya IP Telephony Media Gateway Calls Reports

To access the Avaya IP Telephony Media Gateway Calls Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_MGW_Calls** > **Media_Gateway_Calls**. The list of reports that you can launch using this extension pack is displayed.

Calendar Report

The **Calendar** report uses a traditional, calendar-style layout to show hourly statistics for two call metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

Note: You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic*.*

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected call metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

Note: You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected call metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. Based on your requirement, you can select a metric for which you want to see the value range across a specified time frame. By default, the Heat Chart report displays the data for all calls from the last 31 days, for all days of the week, for all hours of the day, the **Call Duration (secs) (avg)** as the call metric, and with no topology filter selected. The minimum time range for this report is 24 hours. To change the call metric to sample count, select the **Sample Count (sum)** metric from the **Metric**: drop-down list after clicking **Options**.

For example, if you want to identify the hour of the month, week, or day when the number of call attempts were the highest, you can select the **Sample Count** as the metric and set the time control options to the default values for this report as discussed in the previous paragraph and then generate the report. You can move the mouse pointer on a cell in the table of the report to see the raw value of the call metric for the specific hour.

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

Sample Use Case

Use the Heat Chart report to identify the gradual shift in the range of values for a call metric. For example, if you select the call count (**Sample Count (sum)**) metric to generate the Heat Chart report, you can use the report to identify the following instances on your IP Telephony network:

- Spot an isolated instance (when the metric value was high) such as the BHCA (Busy Hour Call Attempts) that affected the results for one day.

- Spot day-of-the-week patterns.

- Verify that a high call volume or call duration condition returned to normal after a period of time.

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** report compares the variation in the call metric values for two different (consecutive) time periods for specified grouping of call attributes and ranks these groups of call attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the call metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select a call metric, specify the call attribute to group by, select the topology filter to scope the report only for certain call attribute values, and specify the time range before generating the report.

For example, if you want to analyze the overall call volume variation for all the communication managers in your deployment environment over a specified time frame, click the **Options** link and select the **Communications Manager IP Address** call attribute from the **Grouping By** drop-down list and select the **Sample Count (sum)** call metric from the **Metric:** drop-down list. You can select an appropriate time frame over which the call volume variation must be analyzed.

By default, this report groups data by the Communications Manager IP Address call attribute.

> **Note:** You can select multiple metrics by clicking ▣ (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the call
>
> attributes. You can remove the additional attribute drop-down lists displayed by clicking ▣ (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic*.*

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report allows you to identify the peak period for a metric. You can generate this report for an hour, a day, or a week to analyze the call duration for all the calls on your network. You can select the number of calls you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the call attributes and the call metric, the **Top N** report ranks the call attribute values in the ascending or descending order of the total raw values of the call metric. This report includes all the calls that had a variation for the specified call attribute. The report displays the rank of the call attribute value along with the call metric value and the percentage of the call metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the call attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the call attributes that exhibit unusual occurrence levels in the calls.

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

This report defaults to the following parameters:

- All calls

- Metric for ranking: **Sample Count (sum)**

- Top/Bottom N: **Top 10**

- Grouping By call attribute: **Communication Manager IP Address**

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

Tips:

- Check this report once a day to see which network attribute might need special attention.

- Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Avaya IP Telephony DSP and CODEC Usage and Summary Reports

The NNM iSPI for IP Telephony provides you the **Avaya IPT NWReg DSP CODEC Sum** extension pack to view and analyze the performance data of the Avaya IP telephony environment. You can use this extension pack to generate reports on the DSP and CODEC usage summary of a network region. You can generate the report based on the CODEC and DSP attributes quality metrics.

The extension pack retains the detailed data in the Network Performance Server (NPS) for a period of 14 days and retains the summary data for a period of 70 days.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

Prerequisites for Viewing the Avaya IP Telephony DSP and CODEC Usage and Summary Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony DSP and CODEC Usage and Summary reporting:

1. Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the NNM iSPI for IP Telephony.

2. Enable Avaya reporting in the NNM iSPI for IP Telephony.

3. Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT CDR Collection extension pack.

Accessing the Avaya IP Telephony DSP Usage and Summary Reports

To access the Avaya IP Telephony DSP Usage and Summary Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_NWReg_DSP_CODEC_Sum**> **DSP_Usage_ and_Summary**. The list of reports that you can launch using this extension pack is displayed.

Accessing the Avaya IP Telephony CODEC Usage and Summary Reports

To access the Avaya IP Telephony CODEC Usage and Summary Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_NWReg_DSP_CODEC_Sum**> **CODEC_Usage_ and_Summary**. The list of reports that you can launch using this extension pack is displayed.

Calendar Report

The Calendar Report uses a traditional, calendar-style layout to show hourly statistics of two DSP/CODEC usage metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month.

Use this report to observe:

● Gradual trends over time

● Isolated spikes

● To verify that an abnormal condition has returned to normal

● To make comparisons

This report also reveals:

● Day of week patterns

● Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected DSP/CODEC usage metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

> **Note:** You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic*.*

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected DSP/CODEC usage metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. Based on your requirement, you can select a metric for which you want to see the value range across a specified time frame. You can move the mouse pointer on a cell in the table of the report to see the raw value of the call metric for the specific hour.

Use the Heat Chart report to identify the gradual shift in the range of values for a specific metric. The report enables you to:

- Spot an isolated instance (when the metric value was high)

- Spot day-of-the-week patterns

- See when high metric values returned to normal after a period of time

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

This report compares the variation in the DSP/CODEC usage metric values for two different (consecutive) time periods for specified grouping of DSP/CODEC usage attributes and ranks these groups of DSP/CODEC usage attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the DSP/CODEC usage metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select a DSP/CODEC usage metric, specify the DSP/CODEC usage attribute to group by, select the topology filter to scope the report only for certain DSP/CODEC usage attribute values, and specify the time range before generating the report.

> **Note:** You can select multiple metrics by clicking (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the DSP/CODEC usage attributes. You can remove the additional attribute drop-down lists displayed by clicking (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report by default, displays the top 10 DSP/CODEC usage instances based on the **DSP Usage**/**G711 Usage** metric respectively. You can generate this report for an hour, a day, or a week to analyze the number of DSP/CODEC usage instances on your network. You can select the number of DSP/CODEC usage instances you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the DSP/CODEC usage attributes and the DSP/CODEC usage metric, the **Top N** report ranks the DSP/CODEC usage attribute values in the ascending or descending order of the total raw values of the DSP/CODEC usage metric. This report includes all the DSP/CODEC usage instances that had a variation for the specified DSP/CODEC usage attribute. The report displays the rank of the DSP/CODEC usage attribute value along with the DSP/CODEC usage metric value and the percentage of the DSP/CODEC usage metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the DSP/CODEC usage attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the DSP/CODEC usage attributes that exhibit unusual occurrence levels in the calls.

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

Tips:

- Check this report once a day to see which network attribute might need special attention.

- Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Avaya IP Telephony Port Network Load Statistics Reports

The NNM iSPI for IP Telephony provides you the **Avaya IPT PN Load Stats** extension pack to view and analyze the performance data of the Avaya IP telephony environment. You can use this extension pack to generate reports for the load statistics of the port network (PN) on your network region.You can generate the reports based on the following types of load statistics:

- Incoming Trunk Load

- Intercom Load

- Outgoing Trunk Load

- Tandem Trunk Load

- Total Load

The extension pack retains the detailed data in the Network Performance Server (NPS) for a period of 14 days and retains the summary data for a period of 70 days.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

Prerequisites for Viewing the Avaya IP Telephony Port Network Load Statistics Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony CDR Collection reporting:

- Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the NNM iSPI for IP Telephony

- Enable Avaya reporting in the NNM iSPI for IP Telephony.

- Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT PN Load Stats extension pack.

Accessing the Avaya IP Telephony Port Network Incoming Trunk Load Reports

To access the Avaya IP Telephony Port Network Incoming Trunk Load Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click the **Avaya IP Telephony** > **Avaya_IPT_PN_Load_Stats** > **Incoming_Trunk_Load**. The list of reports that you can launch using this extension pack is displayed. You can click any report format to launch the specific report based on the default metrics (**Intra PN Usage**) as the primary metric and the **Intra PN Peg** as the secondary metric with no Topology Filter selected.

Accessing the Avaya IP Telephony Port Network Intercom Load Reports

To access the Avaya IP Telephony Port Network Intercom Load Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click the **Avaya IP Telephony** > **Avaya_IPT_PN_Load_Stats** > **Intercom_Load**. The list of reports that you can launch using this extension pack is displayed. You can click any report format to launch the specific report based on the default metrics (**Intra PN Usage**) as the primary metric and the **Intra PN Peg** as the secondary metric with no Topology Filter selected.

Accessing the Avaya IP Telephony Port Network Outgoing Trunk Load Reports

To access the Avaya IP Telephony Port Network Outgoing Trunk Load Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click the **Avaya IP Telephony** > **Avaya_IPT_PN_Load_Stats** > **Outgoing_Trunk_Load**. The list of reports that you can launch using this extension pack is displayed. You can click any report format to launch the specific report based on the default metrics (**Intra PN Usage**) as the primary metric and the **Intra PN Peg** as the secondary metric with no Topology Filter selected.

Accessing the Avaya IP Telephony Port Network Tandem Trunk Load Reports

To access the Avaya IP Telephony Port Network Tandem Trunk Load Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click the **Avaya IP Telephony** > **Avaya_IPT_PN_Load_Stats** > **Tandem_Trunk_Load**. The list of reports that you can launch using this extension pack is displayed. You can click any report format to launch the specific report based on the default metrics (**Intra PN Usage**) as the primary metric and the **Intra PN Peg** as the secondary metric with no Topology Filter selected.

Accessing the Avaya IP Telephony Port Network Total Load Reports

To access the Avaya IP Telephony Port Network Total Load Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click the **Avaya IP Telephony** > **Avaya_IPT_PN_Load_Stats** > **Total_Load**. The list of reports that you can launch using this extension pack is displayed. You can click any report format to launch the specific report based on the default metrics (**TDM Occupancy**) as the primary metric and the **PN Occupancy** as the secondary metric with no Topology Filter selected.

Calendar Report

The **Calendar** report uses a traditional, calendar-style layout to show hourly statistics for two incoming load statistics–type metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected load statistics–type metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

> **Note:** You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected load statistics–type metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. Based on your requirement, you can select a metric for which you want to see the value range across a specified time frame. You can move the mouse pointer on a cell in the table of the report to see the raw value of the call metric for the specific hour.

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic*.*

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** report compares the variation in the load statistics–type metric values for two different (consecutive) time periods for specified grouping of the load statistics–type attributes and ranks these groups of attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the selected load statistics–type metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select a metric, specify the attribute to group by, select the topology filter to scope the report only for certain attribute values, and specify the time range before generating the report.

> **Note:** You can select multiple metrics by clicking (the ![icon] **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the load statistics–type attributes. You can remove the additional attribute drop-down lists displayed by clicking (the ![icon] **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic*.*

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report displays the top 10 instances based on the default metric of the selected type of load statistics such as Incoming Trunk Load, Intercom Load, and Tandem Trunk Load. You can generate this report for an hour, a day, or a week to analyze the number of the instances of the selected metric on your network. You can select the number of the metric instances that you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the attributes and the metric of a load statistics–type, this report ranks the attribute values in the ascending or descending order of the total raw values of the selected

metric. This report includes all the instances of the selected load statistics–type that had a variation for the specified attribute. The report displays the rank of the attribute value along with the metric value and the percentage of the metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the attributes that exhibit unusual occurrence levels in the calls.

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic*.*

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

> **Tips:**
>
> - Check this report once a day to see which network attribute might need special attention.
>
> - Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Avaya IP Telephony Communication Manager Processor Occupancy Reports

The NNM iSPI for IP Telephony provides the **Avaya IPT CMProcOccupancy Sum** extension pack to view and analyze the performance data of the Avaya IP telephony environment. You can use this extension pack to generate reports for the processor occupancy of the Avaya Communication Manager. You can generate the report based on the processor occupancy attributes such as Communication Manager IP Address and SGUUID, and the processor occupancy quality metrics such as the System Management Occupancy Percentage and Static Occupancy Percentage.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

Prerequisites for Viewing the Communication Manager Processor Occupancy Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony Communication Manager Processor Occupancy reporting:

1. Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the iSPI for IP Telephony.

2. Enable Avaya reporting in the NNM iSPI for IP Telephony.

3. Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT CMProcOccupancy Sum extension pack.

Accessing the Avaya IP Telephony Communication Manager Processor Occupancy Reports

To access the Avaya IP Telephony Communication Manager Processor Occupancy Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_CMProcOccupancy_Sum** > **Processor_ Occupancy_Summary**. The list of reports that you can launch using this extension pack is displayed.

Calendar Report

The **Calendar** Report uses a traditional, calendar-style layout to show hourly statistics for two processor occupancy metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**)basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** Report plots the selected processor occupancy metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

Note: You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. Based on your requirement, you can select a metric for which you want to see the value range across a specified time frame. You can move the mouse pointer on a cell in the table of the report to see the raw value of the call metric for the specific hour.

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

Use the Heat Chart report to identify the gradual shift in the range of values for a specific metric. The report enables you to:

- Spot an isolated instance (when the metric value was high)

- Spot day-of-the-week patterns

- See when high metric values returned to normal after a period of time

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** Report compares the variation in the processor occupancy metric values for two different (consecutive) time periods for specified grouping of processor occupancy attributes,

and ranks these groups of processor occupancy attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the processor occupancy metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select a processor occupancy metric, specify the processor occupancy attribute to group by, select the topology filter to scope the report only for certain processor occupancy attribute values, and specify the time range before generating the report.

> **Note:** You can select multiple metrics by clicking [icon] (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the processor occupancy attributes. You can remove the additional attribute drop-down lists displayed by clicking [icon] (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report, by default, displays the top 10 processor occupancy instances based on the **Idle Occupancy Percentage** metric. You can generate this report for an hour, a day, or a week

to analyze the number of in-service trunks on your network. You can select the number of trunk activities you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the processor occupancy attributes and the processor occupancy metric, the **Top N** report ranks the processor occupancy attribute values in the ascending or descending order of the total raw values of the processor occupancy metric. This report includes all the processor occupancy instances that had a variation for the specified processor occupancy attribute. The report displays the rank of the processor occupancy attribute value along with the processor occupancy metric value and the percentage of the metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the processor occupancy attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the processor occupancy attributes that exhibit unusual occurrence levels in the calls.

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly

(**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

> **Tips:**
>
> - Check this report once a day to see which network attribute might need special attention.
>
> - Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Avaya IP Telephony RTP Session Metrics Reports

The NNM iSPI for IP Telephony provides the **Avaya RTP Session Metrics** extension pack. You can use this extension pack to generate reports for the Real-time Transport Protocol (RTP) sessions on your IP telephoy network. You can generate reports based on the RTP session attributes such as CName (Canonical Name), and the peer CName, and the RTP session quality metrics such as the session duration and the average MOS. The extension pack retains the detailed data and the summary data in the Network Performance Server (NPS) for a period of 32 days.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

- Recent Sessions

Prerequisites for Viewing the Avaya IP Telephony RTP Session Metrics Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony RTP Session Metrics reporting:

- Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the NNM iSPI for IP Telephony.

- Enable Avaya CDR reporting in the NNM iSPI for IP Telephony.

- Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT RTP Session Metrics extension pack.

Accessing the Avaya IP Telephony RTP Session Metrics Reports

To access the Avaya IP Telephony RTP Session Metrics Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_RTP_Session_Metrics** > **Participant_Reception_ Metrics**. The list of reports that you can launch using this extension pack is displayed. You can click any report format to launch the specific report based on the default metrics (**Session Duration**) as the primary metric and the **Avg. MOS** as the secondary metric with no Topology Filter selected.

Calendar Report

The **Calendar** report uses a traditional, calendar-style layout to show hourly statistics for two RTP session metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected RTP session metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

> **Note:** You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected RTP session metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. Based on your requirement, you can select a metric for which you want to see the value range across a specified time frame. By default, the Heat Chart report displays the data for all RTP sessions from the last 31 days, for all days of the week, for all hours of the day with no topology filter selected. The minimum time range for this report is 24 hours. To change the call metric to sample count, select the **Sample Count (sum)** metric from the **Metric** drop-down list after clicking **Options**.

You can move the mouse pointer on a cell in the table of the report to see the raw value of the call metric for the specific hour.

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

Sample Use Case

Use the Heat Chart report to identify the gradual shift in the range of values for a call metric. For example, if you select the call count (**Sample Count (sum)**) metric to generate the Heat Chart report, you can use the report to identify the following instances on your IP Telephony network:

- Spot an isolated instance (when the metric value was high) such as the BHCA (Busy Hour Call Attempts) that affected the results for one day.

- Spot day-of-the-week patterns.

- Verify that a high call volume or call duration condition returned to normal after a period of time.

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** report compares the variation in the RTP session metric values for two different (consecutive) time periods for a specified grouping of RTP session attributes and ranks these groups of RTP session attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the RTP session metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select an RTP session metric, specify the RTP session attribute to group by, select the topology filter to scope the report only for certain RTP session attribute values, and specify the time range before generating the report.

> **Note:** You can select multiple metrics by clicking ▣ (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the call attributes. You can remove the additional attribute drop-down lists displayed by clicking ✖ (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report, by default, displays the top 10 RTP sessions based on the **Session Duration (secs)** metric. You can generate this report for an hour, a day, or a week to analyze the number of RTP sessions on your network. You can select the number of RTP sessions you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the RTP session attributes and the RTP session metric, the **Top N** report ranks the RTP session attribute values in the ascending or descending order of the total raw values of the RTP session metric. This report includes all the RTP sessions that had a variation for

the specified attribute. The report displays the rank of the RTP session attribute value along with the RTP session metric value and the percentage of the RTP session metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the RTP session attribute values that had occurrences at the extremes.

You can also use this report to investigate historical sampled data for the RTP session attributes that exhibit unusual occurrence levels in the RTP sessions. For example, if you want to identify the Top N termination reasons for the call, you can specify the **Sample Count (sum)** as the call metric and select the call attribute **Termination Reason** in the **Grouping By** drop-down list.

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time
- Topology
- Options
- Show Bookmark
- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.
- To change the Topology Filters defaults, see the *Set Topology Filters* topic.
- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time
- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

> **Tips:**
>
> - Check this report once a day to see which network attribute might need special attention.
>
> - Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Recent Sessions Report

The **Recent Sessions** report, by default, displays the recent two RTP sessions on the network. You can select the number of RTP sessions that you want the report to display from the options provided by the report template.

Avaya IP Telephony Trunk Calls Reports

The NNM iSPI for IP Telephony provides the **Avaya IPT TG Calls** extension pack to view and analyze the performance data of the Avaya IP telephony environment. You can use this extension pack to generate reports for the call metrics based on the attributes such as the Direction and ICT Name.

The extension pack retains the detailed data in the Network Performance Server (NPS) for a period of 14 days and retains the summary data for a period of 400 days. You can use this extension pack for long term capacity planning.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

Prerequisites for Viewing the Avaya IP Telephony Trunk Call Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony CDR Collection reporting:

- Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the NNM iSPI for IP Telephony.

- Enable Avaya CDR reporting in the NNM iSPI for IP Telephony.

- Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT TG Calls extension pack.

Accessing the Avaya IP Telephony Trunk Call Reports

To access the Avaya IP Telephony Trunk Call Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_TG_Calls**> **Trunk_Calls**. The list of reports that you can launch using this extension pack is displayed. You can click any report format to launch the specific report based on the default metrics (**Period Length (secs) (sum)**) as the primary metric and the **Call Duration (secs) (avg)** as the secondary metric with no Topology Filter selected.

Calendar Report

The **Calendar** report uses a traditional, calendar-style layout to show hourly statistics for two call metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month.

For example, if you want to analyze the call duration and call volume based on the type of calls, you can select **Call Duration (secs) (avg)** and **Sample Count (sum)** as the primary and secondary metrics and select the required values for the **Call Classification** call attribute from the Topology Filters page.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

> **Note:** You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. Based on your requirement, you can select a metric for which you want to see the value range across a specified time frame. The minimum time range for this report is 24 hours. To change the metric to sample count, select the **Sample Count (sum)** metric from the **Metric:** drop-down list after clicking the **Options** link.

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** report compares the variation in the metric values for two different (consecutive) time periods for specified grouping of attributes and ranks these groups of attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select a metric, specify the attribute to group by, select the topology filter to scope the report only for certain attribute values, and specify the time range before generating the report.

For example, if you want to analyze the overall call volume variation for all the communication managers in your deployment environment over a specified time frame, click the **Options** link and select the **Communications Manager IP Address** call attribute from the **Grouping By** drop-down list and select the **Sample Count (sum)** call metric from the **Metric:** drop-down list. You can select an appropriate time frame over which the call volume variation must be analyzed.

> **Note:** You can select multiple metrics by clicking ![icon] (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the call attributes. You can remove the additional attribute drop-down lists displayed by clicking ![icon] (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report by default, displays the top 10 calls based on the **Period Length (secs) (avg)** metric. You can generate this report for an hour, a day, or a week to analyze the call duration for all the calls on your network. You can select the number of calls you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the call attributes and the metric, the **Top N** report ranks the attribute values in the ascending or descending order of the total raw values of the metric. The report displays the rank of the attribute value along with the metric value and the percentage of the metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the attributes that exhibit unusual occurrence levels.

For example, if you want to identify the Top N termination reasons for the call, you can specify the **Sample Count (sum)** as the call metric and select the call attribute **Termination Reason** in the **Grouping By** drop-down list.

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

Tips:

- Check this report once a day to see which network attribute might need special attention.

- Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Avaya IP Telephony Trunk Group and Route Pattern Usage Reports

The NNM iSPI for IP Telephony provides the **Avaya IPT TG RP Usage** extension pack. You can use this extension pack to generate reports for the trunk group and route pattern usage based on the usage attributes and usage quality metrics.

The extension pack retains the detailed data in the Network Performance Server (NPS) for a period of 14 days and retains the summary data for a period of 400 days. This helps you in long-term capacity planning.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

- Peak Usage (For Avaya Route Pattern usage)

- P.01 GoS Summary

Prerequisites for Viewing the Avaya IP Telephony Trunk Group and Route Pattern Usage Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony CDR Collection reporting:

- Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the NNM iSPI for IP Telephony.

- Enable the Avaya trunk group usage and the route pattern usage reporting in the NNM iSPI for IP Telephony.

- Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT TG RP Usage extension pack.

Accessing the Avaya IP Telephony Trunk Group Usage Reports

To access the Avaya IP Telephony Trunk Group Usage Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_TG_RP_Usage** > **Trunk_Group_Usage**. The list of reports that you can launch using the Avaya trunk group report format is displayed. You can click any report format to launch the specific report based on the default metrics (**Usage**) as the primary metric and the **Inbound Calls Carried** as the secondary metric with no Topology Filter selected.

Accessing the Avaya IP Telephony Route Pattern Usage Reports

To access the Avaya IP Telephony Route Pattern Usage Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_TG_RP_Usage** > **Route_Pattern_Usage**. The list of reports that you can launch using the Avaya route pattern report format is displayed. You can click any report format to launch the specific report based on the default metrics (**Calls Offered**) as the primary metric and the **Calls Blocked** as the secondary metric with no Topology Filter selected.

Calendar Report

The **Calendar** report uses a traditional, calendar-style layout to show hourly statistics for two metrics in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

> **Note:** You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report displays the hourly values of the selected metric in a color-coded tabular format. The report lists the hour of the day vertically and the day of the month horizontally. The report also displays the legend for the color coding on top of the report using which you can identify the color code used to represent the specific value ranges for the metric. To change the metric to sample count, select the **Sample Count (sum)** metric from the **Metric:** drop-down list after clicking the **Options** link.

You can move the mouse pointer on a cell in the table of the report to see the raw value of the call metric for the specific hour.

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

Use the Heat Chart report to identify the gradual shift in the range of values for a specific metric. The report enables you to:

- Spot an isolated instance (when the metric value was high)

- Spot day-of-the-week patterns

- See when high metric values returned to normal after a period of time

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** report compares the variation in the metric values for two different (consecutive) time periods for specified grouping of attributes and ranks these groups of attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the metric for the previous time frame and the current time frame along with the difference and the percentage of change in the value. Based on your requirement, you can select a metric, specify the attribute to group by, select the topology filter to scope the report only for certain attribute values, and specify the time range before generating the report.

> **Note:** You can select multiple metrics by clicking ![icon] (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the call attributes. You can remove the additional attribute drop-down lists displayed by clicking ![icon] (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report, by default, displays the top 10 trunk group usage instances based on the **Usage** metric and the top 10 route pattern usage instances based on the **Calls Carried** metric for the Avaya IP Telephony Trunk Group Usage report and the Avaya IP Telephony Route Pattern Usage report respectively. You can generate this report for an hour, a day, or a week to analyze the number of route pattern instances on your network. You can select the number of trunk group/route pattern activities you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the attributes and the metric, the **Top N** report ranks the attribute values in the ascending or descending order of the total raw values of the metric. The report displays the rank of the attribute value along with the metric value and the percentage of the metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the attributes that exhibit unusual occurrence levels.

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

> **Tips:**
>
> - Check this report once a day to see which network attribute might need special attention.
>
> - Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Usage Report

The **Peak Usage** report lets you analyze the Avaya Route Pattern usage and determine the peak periods of the calls offered to the Route Patterns. The report lists the data in a tabular output for the Peak Period (Hour or Day or Week) for the Route Patterns along with the split of peak period calls carried percentage among the various positional Trunk Groups referenced by Route Pattern.

You can select the Peak Period (Hour or Day or Week) to be identified by selecting from the drop down in the Report Options. You can also use the appropriate filters to restrict the set of Route Patterns for which the report runs.

P.01 GoS Summary Report

The **P.01 GoS Summary** report lets you analyze the Avaya Route Pattern/Trunk Set usage and call routing capacity planning by generating the usage summary for a selected set of Avaya Route Patterns /Trunk Sets that reference channelized interfaces such as T1/E1 PRIs.

For the Avaya Route Pattern Usage

In a tabular display, for each route pattern, the report, displays the detailed summary for each Trunk Group referenced by the Route Pattern as well as for the whole set of Trunk Groups referenced by the route pattern. The detailed Trunk Group by Trunk Group summary for each Route Pattern, and the summary for the set of Trunk Groups referenced by the Route pattern are similar to the result of analysis done in the Trunk Group P.01 Grade of Service (GoS) Summary report.

In the detailed Trunk group by Trunk Group summary table located in the P.01 GoS Summary column in the table of Route Patterns, the rows are sorted by the priority or selection order of the Trunk Group within the Route Pattern. However, you can select different sorting criteria to sort the rows by choosing the right sort options in the Report Options.

In each row of the Route Pattern summary in the outer table, the report also displays the percentage of total Route Pattern calls carried through the positional Trunk Group in the Route Pattern.

The report uses hourly aggregated Avaya Trunk Group Usage and Route Pattern usage information stored in NPS under the Avaya IP Telephony Route Patterns and Trunk Group usage reporting package.

For the Avaya Trunk Set Usage

This report captures a summary of usage for any such selected set of Trunk Sets along with summary of usage for each Trunk Set in the set.

The final result for the set and each Trunk Group in the set also includes an indicator for the Grade of Service for the set as well as each Trunk Group in the set. This indicator is expressed as a percentage of the P.01 Grade Of Service for the number of channels in the set of Trunk Groups for the set. The compliance indicator is reported for each Trunk Group in the selected set as well.

The P.01 Grade of Service indicates, for a given number of channels in a logical bundle, the Busy Hour Traffic (BHT) that the set representing the logical bundle can sustain with a 0.01% blockage.

The report uses hourly aggregated Avaya Trunk Group Usage information stored in NPS under Avaya IP Telephony Route Patterns and Trunk Group usage reporting package to arrive at the conclusions.

For each Trunk Group in the set, the report first determines the Total Usage, Total Calls, busiest hour calls offered to the Trunk Group, and the Average Usage per call. The Busiest Hour Traffic (BHT) is then determined by multiplying the Busiest Hour Calls offered and the Average Usage per Call. The BHT determined is compared against the P.01 GoS BHT for the total number of channels/trunkmembers in the Trunk Group and the comparison is expressed as a percentage and indicates the compliance to P.01 GoS Standards.

The report performs similar calculations for the set as a set of Trunk Groups is a larger logical bundle of set of channels/trunk-members. The Total Usage, Total Calls, busiest hour calls offered to the set and the Average Usage per call is determined for the complete set of Trunk Groups in the set. The busiest hour calls offered to the set and the Average Usage for a call are for the set. This is not the sum of the same parameters across the Trunk Groups in the set. The BHT is determined by multiplying the Busiest Hour Calls offered and the Average Usage per Call.The BHT is compared against the P.01 GoS BHT for the total number of channels/trunkmembers in the set and the comparison is expressed as a percentage and indicates the compliance to P.01 GoS Standards. The total number of channels in a set is the sum of number channels/trunkmembers for all the Trunk Groups in the set.

Avaya IP Telephony Trunk Activity Reports

The NNM iSPI for IP Telephony provides the **Avaya IPT Trunk Activity** extension pack to view and analyze the performance data of the Avaya IP telephony environment. You can use this extension pack to generate reports for the trunk activity on your network—based on the attributes such as the trunk group name and the trunk group number, and the trunk group quality metrics such as the number of in-service trunks and the number of active trunks.

The extension pack retains the detailed data in the Network Performance Server (NPS) for a period of 14 days and retains the summary data for a period of 70 days.

You can view the following types of reports using this extension pack:

- Calendar

- Chart Detail

- Heat Chart

- Most Changed

- Peak Period

- Top N

- Top N Chart

- Top N Table

Prerequisites to Enable the Avaya IP Telephony Trunk Activity Reporting

Make sure that the following prerequisites are satisfied to enable the Avaya IP Telephony Trunk Activity reporting:

- Install the NNM iSPI Performance for Metrics (iSPI Performance for Metrics) in your deployment environment before installing the NNM iSPI for IP Telephony.

- Enable Avaya reporting in the NNM iSPI for IP Telephony.

- Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT Trunk Activity extension pack.

Accessing the Avaya IP Telephony Trunk Activity Reports

To access the Avaya IP Telephony Trunk Activity Reports from the NNMi console, follow these steps:

1. Log on to the NNMi console.

2. Click **Actions** > **NNM iSPI Performance** > **Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.

3. Click **Avaya IP Telephony** > **Avaya_IPT_Trunk_Activity** > **Trunk_Activity**. The list of reports that you can launch using this extension pack is displayed. You can click any report format to launch the specific report based on the default metric (**Number of In-Service Trunks**) as the primary metric and the **Number of Active Trunks** as the secondary metric, with no Topology Filter selected.

Calendar Report

The **Calendar** report uses a traditional, calendar-style layout to show the hourly statistics of two trunk activity metrics, in a single, extended graph spanning over multiple days. By default, this report displays the data for the current month.

Use this report to observe:

- Gradual trends over time

- Isolated spikes

- To verify that an abnormal condition has returned to normal

- To make comparisons

This report also reveals:

- Day of week patterns

- Hour of day patterns

> **Note:** You can generate a Calendar Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Calendar** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Chart Detail Report

The **Chart Detail** report plots the selected metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use this report to:

- Analyze the trend of health and performance for media resources

- Detect persistent problems in media resources

- Compare health and performance of multiple media resources

> **Note:** You can generate a Chart Detail Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Chart Detail** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Heat Chart Report

The **Heat Chart** report plots the selected metrics on a chart at each display grain interval within the specified time frame. This report helps you to do a detailed analysis of the trend of aggregated metric values (aggregated at selected display grain interval) over a period of time. Based on your requirements, you can select a pair of metrics for which you want to analyze the data.

Use the Heat Chart report to identify the gradual shift in the range of values for a specific metric. The report enables you to:

- Spot an isolated instance (when the metric value was high)

- Spot day-of-the-week patterns

- See when high metric values returned to normal after a period of time

> **Note:** You can generate a Heat Chart Report on a Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Heat Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Most Changed Report

The **Most Changed** report compares the variation in the metric values for two different (consecutive) time periods for specified grouping of trunk activity attributes and ranks these groups of trunk activity attributes based on the variation. The sort order lists the attributes from the attributes with the most changed values to the attributes with the least changed values. The report displays the value of the trunk activity metric for the previous time frame and the current time frame

along with the difference and the percentage of change in the value. Based on your requirement, you can select a trunk activity metric, specify the trunk activity attribute to group by, select the topology filter to scope the report only for certain trunk activity attribute values, and specify the time range before generating the report.

> **Note:** You can select multiple metrics by clicking (the **Add new grouping** icon) on the **Report Options** page. When you click this icon, it displays another drop-down list of the call attributes. You can remove the additional attribute drop-down lists displayed by clicking (the **Remove grouping** icon).

Use this report to spot objects at selected grouping level that saw significant growth from the previous selected time period to the selected time period. Significant growth could point to a developing problem you need to know about. You can change the ranking metric and also the number of elements that are listed.

> **Note:** You can generate a Most Changed Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Most Changed** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Peak Period Report

The **Peak Period** report, by default, displays the top 10 trunk activities based on the **Number of In-Service Trunks** metric. You can generate this report for an hour, a day, or a week to analyze the number of in-service trunks on your network. You can select the number of trunk activities you want the report to display from the options provided by the report template.

Using this report, you can:

- Identify the performance and utilization of the selected metrics during the peak period

- Identify the interfaces that have the highest or lowest performances or utilization levels during the peak period

- Compare the performance for multiple media devices during the peak period using this report

The controls that appear on the **Peak Period** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

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- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Report

Based on your selection of the trunk activity attributes and the trunk activity metric, the **Top N** report ranks the trunk activity attribute values in the ascending or descending order of the total raw values of the trunk activity metric. This report includes all the trunk activities that had a variation for the specified attribute. The report displays the rank of the attribute value along with the metric value and the percentage of the metric value with respect to all the values listed. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis. You can use this report to identify the call attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the attributes that exhibit unusual occurrence levels in the calls.

> **Note:** You can generate a Top N Report on an Hourly (**H**), Daily (**D**), Weekly (**W**), or a Monthly (**M**) basis.

The controls that appear on the **Top N** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

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- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Chart Report

Based on your selection of the attributes and the metric, the **Top N Chart** report ranks the attribute values in the ascending or descending order of the total raw values of the metric along with a chart that plots the change of values over the specified time frame. Based on your requirement, you can select a metric using the **Options** link and specify the topology filter using the **Topology Filter** link to fine tune the analysis.

The controls that appear on the **Top N Chart** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

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- To change the Report Options defaults, see the *Change Report Options* topic.

Top N Table Report

The **Top N Table** report ranks the network elements by the attributes that you select. Unlike the **Top N** report, this report does not show any bar charts or time series graphs. In a large environment, NPS can generate the Top N Table faster than it can generate the Top N report. If you want to view Top N elements in the least possible time, choose the Top N Table report instead of the Top N report.

You can use this report to spot the element that performed at the extremes and to analyze historical data for elements that exhibit unusual utilization level. You can also use this report to do the following:

- Detect the attribute that has a health or performance problem.

- Analyze the utilization of the attributes during a specific time range.

- Detect over-utilized and under-utilized attributes.

- Compare the performance of multiple attributes.

Tips:

- Check this report once a day to see which network attribute might need special attention.

- Check this report throughout the day to see which network attributes are performing at the extremes and might need special attention.

The controls that appear on the **Top N Table** report are as follows:

- Time

- Topology

- Options

- Show Bookmark

- Help

You can use these controls to view and modify the report details.

See the following topics in the *Using Reports > Change Default Settings* section in the *Network Performance Server/NNM iSPI Performance for Metrics Online Help*:

- To change the Time Controls defaults, see the *Change Time Controls* topic.

- To change the Topology Filters defaults, see the *Set Topology Filters* topic.

- To change the Report Options defaults, see the *Change Report Options* topic.

We appreciate your feedback!

If you have comments about this document, you can contact the documentation team by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Online Help for Avaya IP Telephony Reports (NNM iSPI for IP Telephony 10.00)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to docfeedback@hp.com.