

HP Network Node Manager iSPI for IP Telephony Software

For the HP-UX, Linux, Solaris, and Windows ® operating systems

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Online Help for Avaya Network Region DSP and Codec
Usage Summary Reports

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Note: Some topics do not convert properly to PDF, causing format problems. Some elements of online help are completely removed from the PDF version. Those problem topics can be successfully printed from within the online help.

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Avaya IP Telephony DSP and CODEC Usage Summary Reports

The iSPI for IP Telephony provides the Avaya IPT NWReg DSP CODEC Sum, extension pack. You can use this extension pack to generate reports for the DSP and CODEC usage summary for 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.

Prerequisites to Enable Avaya IP Telephony DSP and CODEC Usage Summary Reporting

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

- Install the NNM iSPI Performance for Metrics/Network Performance Server (iSPI Performance for Metrics) in your deployment environment before installing the iSPI for IP Telephony.
- Enable Avaya reporting in the iSPI for IP Telephony. See the Online Help for the iSPI for IP Telephony > **Help for Administrators > Reporting Configuration > Configure Avaya Reporting > Enabling IP Network Region DSP/Codec Summary Report** section for additional information.
- Verify that the iSPI Performance for Metrics is running before opening the reports provided by the Avaya IPT NWReg DSP CODEC Sum extension pack.

Specifying Time Controls

You can specify the time-specific details using which you want the report to be generated on the Time Controls page. This page lets you specify the following time control details:





1. Click **Time Control** from the left panel on the NNMi Performance page. This displays the following options:
 - **Relative Start:** sets the date and time for report generation. based on the time frame specified in the **Last** drop-down list. Select **Yes** to enable this option. If you select **No**, you can specify the **Start Date, Time** (start time), the **End Date, Time**(end time), and the **Interval** to be used to generate the reports.
 - **Last:** set the time frame for which the report must be generated from this drop-down list. You can select one of the following options:
 - 1 Minute
 - 5 Minutes
 - 15 Minutes
 - 30 Minutes
 - 1 Hour
 - 2 Hours

- 12 Hours
 - 24 Hours
 - 7 Days
 - 31 Days
 - Other: Select this option to specify the time frame of your choice.
2. **Grain:** set the interval at which the report must represent data.
 3. **Time Zone:** Select the time zone based on which you want to generate the report, from this drop-down list. You can select the time zone of your choice even if you choose to enable the **Relative Start** option.
 4. **Auto Refresh:** set the auto refresh rate for the report to a specific interval or disable the auto refresh feature for the report.
 5. Click **Submit** to apply the changes.

Specifying Topology Filters

Topology filters allow you to scope or filter the CODEC usage summary metric reports based on the various combinations of the CODEC usage summary attribute values available in the accumulated CODEC usage summary metric data. You can use the Topology Filter page to specify the topology filters that you require.

To access the Topology Filter page and specify the topology filters, do as follows:

1. From any report that is displayed, click **Topology Filters** from the menu. This displays the Topology Filter page.
2. Select the topology filter as required from the list of topology filters using any of the following methods:
 - If you want to select only one value for a topology attribute, click the **Single value select** icon,  and then select a value of your choice.
 - If you want to select multiple values, click the **Multi value select** icon , and then select values of your choice (by using the Control **Ctrl**-key).
 - If you want to search and select a value from a list of values, click the **Search and Select** icon .
 - If you want to search and select a value for a topology filter from a list of values, click the **Search and Select** icon . This displays the following options:
 - **Keywords:** selecting the **Keywords** check box helps you search for values based on the keywords that you specify in the box provided. You can specify multiple keywords separated by white spaces. Click the **Options** link to and select from the available options to specify how the specified keywords must be used to perform the search. You can select the **Case insensitive** check box if you do not want the keywords to be searched based on case sensitivity.

- **Results:** This list displays the topology filter values that match the specifications you provided after you click the **Search** button. You can select the values that you want and click the **Insert** button to move the selected values to the **Choices** list. The report uses the topology filter values in the Choices list to generate the report.
- **Choices:** This list displays the topology filter values that you have selected to generate the report. You can select values that you do not want to be used and then click the **Remove** button to move the values back to the Results list.

Note: You can use the **Select All** link to select all the listed values. You can use the **Deselect All** link to clear all the selected values.

3. Select the **Not** option to specify that the selected topology filter must not be considered when generating the report.
4. Click **Apply** and then click **Confirm Selection** to select the topology filter and generate the report.

Note: You can click **Reset** to clear all the topology filters you selected.

You can specify the topology filters based on the following attributes or dimensions.

Attribute	Description
Communications Manager IP Address	The IP address of the Communication Manager.
Network Region	The network region that references the DSP/CODEC resources.
SGUUID	The UUID of the security group that is associated with the Communications Manager. Note: Do not use this attribute to filter or group your reports. This is an internal attribute used for row-level security of user roles.

Note: On the Topology Filters page, if you do not find a specific attribute value that you want to include in the filter selection from the **Selection** list, verify the following details:

- The Topology Filters page lists the attribute values in the **Selection** list. The list of attribute values are displayed based on all the CODEC usage summary records available in the database at a given point of time.
- By default, the Topology Filters page lists only 5000 distinct values in the **Selection** list for a specific CODEC usage summary attribute. If you are unable to find a specific value in the list, you can click the **Search and Select** icon to select the value of your choice.

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:

1. Log on to the NNMi console.
2. Click **Actions > Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.
3. Click the **Avaya IP Telephony > Avaya_IPT_NWRReg_DSP_Codec_Sum > Codec_Usage_and_Summary** to view a list of the supported processor occupancy summary report formats.
4. You can click any report format to launch the specific report based on the default metrics (**G711 Usage**) as the primary metric and the **G711 in Region Peg** as the secondary metric with no Topology Filter selected.

After launching a report, you can configure the report based on your requirements by specifying the following details and regenerating the report:

- [Specify time controls](#)
- [Specify topology filters](#)
- [Specify metrics](#)

Specifying Metrics for Reports

You can use the **Options** link to specify the metrics or the attribute distinct count, based on which you want to generate the report.

To access the Report Options page and specify the metrics, do as follows:

1. From any report that is displayed, click **Options** from the menu. This displays the Report Options page.
2. Select the primary metric and the secondary metric from the respective drop-down lists as required for the report.
3. Click **Confirm Selection** to generate the report.

Click here to see the metrics that you can select to generate reports.

Metric	Description
¹ G711 Usage (Erlangs)	The G711 usage in erlangs for the CODEC.
¹ G711 In Region peg	The G711 in region peg for the CODEC.
¹ G711 Out of Region peg	The G711 out of region peg for the CODEC.
¹ G723/9 Usage (Erlangs)	The G723/9 usage for the CODEC.
¹ G723/9 In Region peg	The G723/9 In Region peg for the CODEC.
¹ G723/9 Out of Region peg	The G723/9 out of Region peg for the CODEC
¹ Total Number of IP Codec Resources	The total number of IP Codec resources.
Attribute Distinct Count	Description
Communications Manager IP Address (countDistinct)	The distinct count of the Communications Manager IP Address, where Communications Manager IP Address

Metric	Description
	represents the name of the attribute.
Network Region (countDistinct)	The distinct count of the Network Region, where Network Region represents the name of the attribute.
SGUUID (countDistinct)	The distinct count of the SGUUID, where SGUUID represents the name of the attribute.

¹You can select any of the following options for the metric:

- Average (avg)
- Minimum (min)
- Maximum (max)

Note: The distinct count of attributes represents the sum of the occurrences of unique values for the call attributes. For example, if you select the Communications Manager IP Address (countDistinct) metric, and three distinct communication managers had participated during the time specified, the report lists the value for the Communications Manager IP Address (countDistinct) as 3.

Types of Reports

This extension pack helps you to generate the following types of reports based on the metrics that you specify:

- [Chart Detail](#)
- [Heat Chart](#)
- [Top N](#)
- [Most Changed](#)
- [Calendar](#)
- [Top N Chart](#)
- [Peak Period](#)

Chart Detail Report

This report plots the selected 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.

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

To launch a Chart Detail Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony CODEC Usage and Summary Reports](#)" (on page 10) to launch the Chart Detail report for a specific time frame.

2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on [page 8](#)) section.
3. Perform the steps in the section "[Specifying Topology Filters](#)" (on [page 9](#)) to specify the topology filters to be applied on the report.
4. Perform the steps listed in the "[Specifying Metrics for Reports](#)" (on [page 11](#)) to specify the primary metric and the secondary metric for the report. You can select one of the following options from the **Chart or Table** drop-down list to specify the format in which you want the report to be displayed:
 - **Chart**: specifies the report to be displayed as a chart. The Chart Detail report uses this option by default.
 - **Table**: specifies the report to be displayed in a tabular format. The table lists the rows based on the specified display grain (time interval) and displays the corresponding values for the primary and the secondary metrics.
 - **Chart and Table**: specifies the report to be displayed both in a chart and a tabular format.
5. Click **Confirm Selection** to generate the report.

Heat Chart Report

This report displays the hourly values of the selected 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.

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

To launch a Heat Chart Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony CODEC Usage and Summary Reports](#)" (on [page 10](#)) to launch the Heat Chart report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on [page 8](#)) section.
3. Perform the steps in the section "[Specifying Topology Filters](#)" (on [page 9](#)) to specify the topology filters to be applied for the report.
4. Perform the steps listed in the "[Specifying Metrics for Reports](#)" (on [page 11](#)) to specify the primary metric and the secondary metric for the report.
5. Click **Confirm Selection** to generate the report.



Top N Report

Based on your selection of the CODEC usage attributes and the CODEC usage metric, this report ranks the CODEC usage attribute values in the ascending or descending order of the total raw values of the CODEC usage metric. This report includes all the CODEC usage instances that had a variation for the specified CODEC usage attribute. The report displays the rank of the CODEC usage attribute value along with the CODEC usage metric value and the percentage of the 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 CODEC usage attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the 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.

To launch a Top N Report based on your requirements, do as follows:



1. Perform the steps in the section "[Accessing the Avaya IP Telephony CODEC Usage and Summary Reports](#)" (on page 10) to launch the Top N report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Click **Options** from the menu.
4. Select the topology filter to be applied for the report from the **Grouping by:** drop-down list.
Note: You can select multiple call attributes by clicking the **Add New Grouping** icon . Clicking on this icon displays another drop-down list of the call attributes. You can remove the additional call attribute drop-down lists displayed clicking the **Remove Grouping** icon .
5. Select the metric for the report from the **Metric:** drop-down list.
6. Select one of the following options from the **Top N:** drop-down list to view the report for the specified number of attributes:
 - **Top 5:** lists five of the specified attributes with the maximum metric value in the descending order of the value, with the highest value at the top of the list.
 - **Top 10:** lists 10 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 25:** lists 25 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 50:** lists 50 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 100:** lists 100 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Bottom 5:** lists five of the specified attributes with the maximum metric value in the ascending order of the value, with the lowest value at the top of the list.
 - **Bottom 10:** lists 10 of the specified attributes with the maximum metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Bottom 25:** lists 25 of the specified attributes with the maximum metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Bottom 50:** lists 50 of the specified attributes with the maximum metric value in the ascending order of the value with the highest value at the top of the list.
 - **Bottom 100:** lists 100 of the specified attributes with the maximum metric value in the ascending order of the value with the lowest value at the top of the list.

- **Sort All in Descending:** lists all the specified attributes with the maximum metric value in the descending order of the value, with the highest value at the top of the list.
 - **Sort All in Ascending:** lists all the specified attributes with the maximum metric value in the ascending order of the value, with the lowest value at the top of the list.
7. You can select **Yes** from the **Display Time Series Chart** drop-down list if you want the report to display the data in the form of a chart. The chart uses a different color to plot each Top N attribute. Alternatively, you can click the **Show Chart** link to view the chart after you generate the report.
 8. Click **Confirm Selection** to generate the report.

Top N Chart Report

Based on your selection of the attributes and the metric, this 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.



To launch a Top N Chart Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony CODEC Usage and Summary Reports](#)" (on page 10) to launch the Top N chart report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Click **Options** from the menu.
4. Select the topology filter that you want to apply on the report from the **Grouping by:** drop-down list.
Note: You can select multiple call attributes by clicking the **Add New Grouping** icon . Clicking on this icon displays another drop-down list of the call attributes. You can remove the additional call attribute drop-down lists displayed by clicking the **Remove Grouping** icon .
5. Select the metric for the report from the **Metric:** drop-down list.
6. Select one of the following options from the **Top N:** drop-down list to view the report for the specified number of attributes:
 - **Top 5:** lists five of the specified attributes with the maximum metric value in the descending order of the value, with the highest value at the top of the list.
 - **Top 10:** lists 10 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 25:** lists 25 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 50:** lists 50 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 100:** lists 100 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.

- **Bottom 5:** lists five of the specified attributes with the lowest metric value in the ascending order of the value, with the lowest value at the top of the list.
 - **Bottom 10:** lists 10 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Bottom 25:** lists 25 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Bottom 50:** lists 50 of the specified attributes with the lowest metric value in the ascending order of the value with the highest value at the top of the list.
 - **Bottom 100:** lists 100 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Sort All in Descending:** lists all the specified attributes with the maximum metric value in the descending order of the value, with the highest value at the top of the list.
 - **Sort All in Ascending:** lists all the specified attributes with the maximum metric value in the ascending order of the value, with the lowest value at the top of the list.
7. You can select **Yes** from the **Display Time Series Chart** drop-down list if you want the report to display the data in the form of a chart. The chart uses a different color to plot each Top N attribute. Alternatively, you can click the **Show Chart** link to view the chart after you generate the report.
 8. Click **Confirm Selection** to generate the report.

Most Changed Report

This report compares the variation in the CODEC usage metric values for two different (consecutive) time periods for specified grouping of CODEC usage attributes and ranks these groups of 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 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 CODEC usage metric, specify the CODEC usage attribute to group by, select the topology filter to scope the report only for certain CODEC usage attribute values, and specify the time range before generating the report.

You can select multiple call attributes by clicking the **Add New Grouping** icon . Clicking on this icon displays another drop-down list of the call attributes. You can remove the additional call attribute drop-down lists displayed by clicking the **Remove Grouping** icon .

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

To launch a Most Changed Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony CODEC Usage and Summary Reports](#)" (on page 10) to launch the Most Changed report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Click **Options** from the menu.

4. Select the topology filter to be applied to the report from the **Grouping by:** drop-down list.
5. Select the metric for the report from the **Metric:** drop-down list.
6. Select one of the following options from the **Top N:** drop-down list to view the report for the specified number of attributes.
 - **Top 5:** lists the top five specified attributes with the maximum metric value variation in the descending order of the value with the highest value at the top of the list.
 - **Top 10:** lists the top 10 specified attributes with the maximum metric value variation in the descending order of the value with the highest value at the top of the list.
 - **Top 25:** lists the top 25 specified attributes with the maximum metric value variation in the descending order of the value with the highest value at the top of the list.
7. Click **Confirm Selection** to generate the report.

Calendar Report

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

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

To launch a Calendar Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony CODEC Usage and Summary Reports](#)" (on page 10) to launch the Calendar report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.

Note: If you select a time range that is less than 24 hours, the report displays the following message: This report is not designed to operate with a time range of less than 24 hours. Please modify your time selections.
3. Perform the steps in the section "[Specifying Topology Filters](#)" (on page 9) to be applied on the report.
4. Perform the steps listed in the "[Specifying Metrics for Reports](#)" (on page 11) to specify the primary metric and the secondary metric for the report.
5. Click **Confirm Selection** to generate the report.

Peak Period Report

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

To launch a Peak Period report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony CODEC Usage and Summary Reports](#)" (on page 10) to launch the Peak Period report for a specific time frame.

2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on [page 8](#)) section.
3. Click **Confirm Selection** to generate the report.

Scheduling Reports

This extension pack allows you to schedule your reports to run at specified intervals. You can do as follows to schedule the generation of reports:

To schedule report generation:

1. Click **BI Server > Public Folders** from the NNM iSPI Performance Report Menu page. This opens the HP NNM iSPI Performance BI Portal page.
2. Click **Avaya IP Telephony**.
3. Click **Avaya_IPT_NWReg_DSP_Codec_Sum**
4. Click **Codec_Usage_and_Summary**. This opens the Codec Usage Summary page.
5. Click **Report Templates suitable for scheduling**. This displays the report templates that you can use to schedule generation of reports:
 - [Chart Detail](#)
 - [Heat Chart](#)
 - [Top N](#)
 - [Most Changed](#)
 - [Calendar](#)
 - [Top N Chart](#)
 - [Peak Period](#)
6. Click a report template. This opens the Time Controls page.
7. Specify the following details for the time controls:
 - **Time Range:** set the time range for report generation. The Server Start Date/Time changes automatically based on your selection for this field.
 - **Display Grain:** set the interval at which the report must represent data.
 - **Note:** The minimum value you can specify for the display grain is one hour for Avaya IP Telephony CODEC Usage Summary reports.
 - **Hour of the Day:** specify the hour of the day for which you want to generate the report. You can select multiple values from this drop-down list by pressing the Control (Ctrl) key.
 - **Day of the Week:** specify the day of the week for which you want to generate the report. You can select multiple values from this drop-down list by pressing the Control (Ctrl) key.
8. Click **Confirm Selection**. This opens the Topology Filter page.
9. Select the required topology attributes for the call that you want to filter while generating the report.
10. Click **Confirm Selection**. This opens the Report Options page.
11. Select the primary and the secondary metrics for the report

12. Click **Confirm Selection** to generate the report and complete the scheduling procedure. The iSPI for IP Telephony generates the report periodically based on the time controls, topology filter, and the metrics specified.

Accessing the Avaya IP Telephony DSP Usage Summary Reports

To access the Avaya IP Telephony DSP usage Summary reports from the NNMi console:

1. Log on to the NNMi console.
2. Click **Actions > Reporting-Report Menu** from the menu bar. This launches the NNM iSPI Performance Report Menu page.
3. Click the **Avaya IP Telephony > Avaya_IPT_NWReg_DSP_Codec_Sum > DSP_Usage_and_Summary** to view a list of the supported DSP usage summary report formats.
4. You can click any report format to launch the specific report based on the default metrics (**DSP Usages**) as the primary metric and the **In Region peg** as the secondary metric with no Topology Filter selected.

After launching a report, you can configure the report based on your requirements by specifying the following details and regenerating the report:

- [Specify time controls](#)
- [Specify topology filters](#)
- [Specify metrics](#)

Specifying Metrics for Reports

You can use the **Options** link to specify the DSP usage metrics or the DSP usage attribute distinct count, based on which you want to generate the report.

To access the Report Options page and specify the metrics, do as follows:

1. From any report that is displayed, click **Options** from the menu. This displays the Report Options page.
2. Select the primary metric and the secondary metric from the respective drop-down lists as required for the report.
3. Click **Confirm Selection** to generate the report.

Click here to see the metrics that you can select to generate reports.

Metric	Description
¹ DSP Usages	The DSP usage in erlangs.
¹ In Region peg	The In Region peg for the DSP.
¹ Denials peg	The denials peg for the DSP.
¹ Blocked Percentage	The percentage of blocked services by the DSP.
¹ Out of Services Percentage	The percentage of out of service services by the DSP.

Metric	Description
¹ Total Number of DSP Resources	The total number of DSP resources.
Attribute Distinct Count	Description
Communications Manager IP Address (countDistinct)	The distinct count of the Communications Manager IP Address, where Communications Manager IP Address represents the name of the attribute.
Network Region (countDistinct)	The distinct count of the Network Region, where Network Region represents the name of the attribute.
SGUUUID (countDistinct)	The distinct count of the SGUUUID, where SGUUUID represents the name of the attribute.

¹You can select any of the following options for the metric:

- Average (avg)
- Minimum (min)
- Maximum (max)

Note: The distinct count of attributes represents the sum of the occurrences of unique values for the attributes. For example, if you select the Communications Manager IP Address (countDistinct) metric, and three distinct communication managers had participated during the time specified, the report lists the value for the Communications Manager IP Address (countDistinct) as 3.

Types of Reports

This extension pack helps you to generate the following types of reports based on the metrics that you specify:

- [Chart Detail](#)
- [Heat Chart](#)
- [Top N](#)
- [Most Changed](#)
- [Calendar](#)
- [Top N Chart](#)
- [Peak Period](#)

Chart Detail Report

This report plots the selected DSP 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.

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

To launch a Chart Detail Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony DSP Usage Summary Reports](#)" (on page 19) to launch the Chart Detail report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Perform the steps in the section "[Specifying Topology Filters](#)" (on page 9) to specify the topology filters to be applied on the report.
4. Perform the steps listed in the "[Specifying Metrics for Reports](#)" (on page 19) to specify the primary metric and the secondary metric for the report. You can select one of the following options from the **Chart or Table** drop-down list to specify the format in which you want the report to be displayed:
 - **Chart:** specifies the report to be displayed as a chart. The Chart Detail report uses this option by default.
 - **Table:** specifies the report to be displayed in a tabular format. The table lists the rows based on the specified display grain (time interval) and displays the corresponding values for the primary and the secondary metrics.
 - **Chart and Table:** specifies the report to be displayed both in a chart and a tabular format.
5. Click **Confirm Selection** to generate the report.

Heat Chart Report

This report displays the hourly values of the selected DSP 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.

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

To launch a Heat Chart Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony DSP Usage Summary Reports](#)" (on page 19) to launch the Heat Chart report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Perform the steps in the section "[Specifying Topology Filters](#)" (on page 9) to specify the topology filters to be applied for the report.
4. Perform the steps listed in the "[Specifying Metrics for Reports](#)" (on page 19) to specify the primary metric and the secondary metric for the report.
5. Click **Confirm Selection** to generate the report.



Top N Report

Based on your selection of the DSP usage attributes and the DSP usage metric, this report ranks the DSP usage attribute values in the ascending or descending order of the total raw values of the

DSP usage metric. This report includes all the DSP usage instances that had a variation for the specified DSP usage attribute. The report displays the rank of the DSP usage attribute value along with the DSP usage metric value and the percentage of the DSP 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 usage attribute values that had occurrences at the extremes. You can also use this report to investigate historical sampled data for the DSP 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.

To launch a Top N Report based on your requirements, do as follows:



1. Perform the steps in the section "[Accessing the Avaya IP Telephony DSP Usage Summary Reports](#)" (on page 19) to launch the Top N report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Click **Options** from the menu.
4. Select the topology filter to be applied for the report from the **Grouping by:** drop-down list.
Note: You can select multiple call attributes by clicking the **Add New Grouping** icon . Clicking on this icon displays another drop-down list of the call attributes. You can remove the additional call attribute drop-down lists displayed by clicking the **Remove Grouping** icon .
5. Select the metric for the report from the **Metric:** drop-down list.
6. Select one of the following options from the **Top N:** drop-down list to view the report for the specified number of attributes:
 - **Top 5:** lists five of the specified attributes with the maximum metric value in the descending order of the value, with the highest value at the top of the list.
 - **Top 10:** lists 10 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 25:** lists 25 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 50:** lists 50 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 100:** lists 100 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Bottom 5:** lists five of the specified attributes with the lowest metric value in the ascending order of the value, with the lowest value at the top of the list.
 - **Bottom 10:** lists 10 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Bottom 25:** lists 25 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.

- **Bottom 50:** lists 50 of the specified attributes with the lowest metric value in the ascending order of the value with the highest value at the top of the list.
 - **Bottom 100:** lists 100 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Sort All in Descending:** lists all the specified attributes with the maximum metric value in the descending order of the value, with the highest value at the top of the list.
 - **Sort All in Ascending:** lists all the specified attributes with the maximum metric value in the ascending order of the value, with the lowest value at the top of the list.
7. You can select **Yes** from the **Display Time Series Chart** drop-down list if you want the report to display the data in the form of a chart. The chart uses a different color to plot each Top N attribute. Alternatively, you can click the **Show Chart** link to view the chart after you generate the report.
 8. Click **Confirm Selection** to generate the report.

Top N Chart Report

Based on your selection of the attributes and the metric, this 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.



To launch a Top N Chart Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony DSP Usage Summary Reports](#)" (on page 19) to launch the Top N chart report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Click **Options** from the menu.
4. Select the topology filter that you want to apply on the report from the **Grouping by:** drop-down list.
Note: You can select multiple call attributes by clicking the **Add New Grouping** icon . Clicking on this icon displays another drop-down list of the call attributes. You can remove the additional call attribute drop-down lists displayed by clicking the **Remove Grouping** icon .
5. Select the metric for the report from the **Metric:** drop-down list.
6. Select one of the following options from the **Top N:** drop-down list to view the report for the specified number of attributes:
 - **Top 5:** lists five of the specified attributes with the maximum metric value in the descending order of the value, with the highest value at the top of the list.
 - **Top 10:** lists 10 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 25:** lists 25 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.

- **Top 50:** lists 50 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Top 100:** lists 100 of the specified attributes with the maximum metric value in the descending order of the value with the highest value at the top of the list.
 - **Bottom 5:** lists five of the specified attributes with the lowest metric value in the ascending order of the value, with the lowest value at the top of the list.
 - **Bottom 10:** lists 10 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Bottom 25:** lists 25 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Bottom 50:** lists 50 of the specified attributes with the lowest metric value in the ascending order of the value with the highest value at the top of the list.
 - **Bottom 100:** lists 100 of the specified attributes with the lowest metric value in the ascending order of the value with the lowest value at the top of the list.
 - **Sort All in Descending:** lists all the specified attributes with the maximum metric value in the descending order of the value, with the highest value at the top of the list.
 - **Sort All in Ascending:** lists all the specified attributes with the maximum metric value in the ascending order of the value, with the lowest value at the top of the list.
7. You can select **Yes** from the **Display Time Series Chart** drop-down list if you want the report to display the data in the form of a chart. The chart uses a different color to plot each Top N attribute. Alternatively, you can click the **Show Chart** link to view the chart after you generate the report.
 8. Click **Confirm Selection** to generate the report.

Most Changed Report

This report compares the variation in the DSP usage metric values for two different (consecutive) time periods for specified grouping of processor occupancy attributes and ranks these groups of DSP 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 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 usage metric, specify the DSP usage attribute to group by, select the topology filter to scope the report only for certain DSP usage attribute values, and specify the time range before generating the report.

You can select multiple call attributes by clicking the **Add New Grouping** icon . Clicking on this icon displays another drop-down list of the call attributes. You can remove the additional call attribute drop-down lists displayed by clicking the **Remove Grouping** icon .

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

To launch a Most Changed Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony DSP Usage Summary Reports](#)" (on page 19) to launch the Most Changed report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Click **Options** from the menu.
4. Select the topology filter to be applied to the report from the **Grouping by:** drop-down list.
5. Select the metric for the report from the **Metric:** drop-down list.
6. Select one of the following options from the **Top N:** drop-down list to view the report for the specified number of attributes.
 - **Top 5:** lists the top five specified attributes with the maximum metric value variation in the descending order of the value with the highest value at the top of the list.
 - **Top 10:** lists the top 10 specified attributes with the maximum metric value variation in the descending order of the value with the highest value at the top of the list.
 - **Top 25:** lists the top 25 specified attributes with the maximum metric value variation in the descending order of the value with the highest value at the top of the list.
7. Click **Confirm Selection** to generate the report.

Calendar Report

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

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

To launch a Calendar Report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony DSP Usage Summary Reports](#)" (on page 19) to launch the Calendar report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.

Note: If you select a time range that is less than 24 hours, the report displays the following message: This report is not designed to operate with a time range of less than 24 hours. Please modify your time selections.
3. Perform the steps in the section "[Specifying Topology Filters](#)" (on page 9) to be applied on the report.
4. Perform the steps listed in the "[Specifying Metrics for Reports](#)" (on page 19) to specify the primary metric and the secondary metric for the report.
5. Click **Confirm Selection** to generate the report.

Peak Period Report

This report by default, displays the top 10 DSP usage instances based on the **DSP Usages** metric. You can generate this report for an hour, a day, or a week to analyze the number of DSP usage

instances on your network. You can select the number of DSP usage instances you want the report to display from the options provided by the report template.

To launch a Peak Period report based on your requirements, do as follows:

1. Perform the steps in the section "[Accessing the Avaya IP Telephony DSP Usage Summary Reports](#)" (on page 19) to launch the Peak Period report for a specific time frame.
2. Specify the time controls for the report as mentioned in the "[Specifying Time Controls](#)" (on page 8) section.
3. Click **Confirm Selection** to generate the report.

Scheduling Reports

This extension pack allows you to schedule your reports to run at specified intervals. You can do as follows to schedule the generation of reports:

To schedule report generation:

1. Click **BI Server > Public Folders** from the NNM iSPI Performance Report Menu page. This opens the HP NNM iSPI Performance BI Portal page.
2. Click **Avaya IP Telephony**.
3. Click **Avaya_IPT_NWReg_DSP_Codec_Sum**
4. Click **DSP_Usage_and_Summary**. This opens the DSP Usage and Summary page.
5. Click **Report Templates suitable for scheduling**. This displays the report templates that you can use to schedule generation of reports:
 - [Chart Detail](#)
 - [Heat Chart](#)
 - [Top N](#)
 - [Most Changed](#)
 - [Calendar](#)
 - [Top N Chart](#)
6. Click a report template. This opens the Time Controls page.
7. Specify the following details for the time controls:
 - **Time Range:** set the time range for report generation. The Server Start Date/Time changes automatically based on your selection for this field.
 - **Display Grain:** set the interval at which the report must represent data.
 - **Note:** The minimum value you can specify for the display grain is one hour for Avaya IP Telephony Processor Occupancy reports.
 - **Hour of the Day:** specify the hour of the day for which you want to generate the report. You can select multiple values from this drop-down list by pressing the Control (Ctrl) key.
 - **Day of the Week:** specify the day of the week for which you want to generate the report. You can select multiple values from this drop-down list by pressing the Control (Ctrl) key.
8. Click **Confirm Selection**. This opens the Topology Filter page.

9. Select the required topology attributes for the call that you want to filter while generating the report.
10. Click **Confirm Selection**. This opens the Report Options page.
11. Select the primary and the secondary metrics for the report
12. Click **Confirm Selection** to generate the report and complete the scheduling procedure. The iSPI for IP Telephony generates the report periodically based on the time controls, topology filter, and the metrics specified.



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