HP Network Node Manager i Software Smart Plug-in for IP Telephony

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

Software Version: 9.00

Online Help: Help for Avaya IP Telephony CDR Reports

PDF Version of Avaya IP Telephony CDR Reports Online Help

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HP Network Node Manager

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Avaya IP Telephony CDR Reports

The iSPI for IP Telephony provides the Avaya IP Telephony CDR extension pack. You can use this extension pack to generate reports for the call metrics: call count (Sample Count) and call duration. See the sections *Call Metric* under Specifying Metrics for Reports for more information about the metrics you can specify to generate reports.

You can filter the reports based on the various attributes of the of the calls, such as the IP address of the communication manager that handled the call, the calling party number, the called party number, and so on. See the section Specifying Topology Filters for more information about the attributes you can specify to filter the reports. 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 IP Telephony infrastructure.

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

- Chart Detail

- Heat Chart

- Top N

- Most Changed

- Calendar

- Managed Inventory

Prerequisites to Enable Avaya CDR Reporting

You must make sure that the following prerequisites are satisfied to enable Avaya IP Telephony CDR reporting:

- Install the NNM iSPI Performance for Metrics/Network Performance Server (iSPI Performance for Metrics/NPS) in your deployment environment before installing the iSPI for IP Telephony. If you have installed the iSPI for IP Telephony before installing the iSPI Performance for Metrics/NPS, make sure that you enable CDR reporting in the iSPI for IP Telephony only after installing the iSPI Performance for Metrics/NPS in your deployment environment.

- Configure the iSPI for IP Telephony to enable CDR data collection from the Avaya Communications Manager. See the *Online Help* for the iSPI for IP Telephony > **Help for Administrators** > **Configure Data Access** > **Configure Data Access for Avaya** section for additional information.

- Enable Avaya CDR reporting in the iSPI for IP Telephony. See the Online Help for the iSPI for IP Telephony > **Help for Administrators** > **Reporting Configuration** > **Configure Avaya CDR Reporting** section for additional information.

- Verify that the iSPI Performance for Metrics/NPS is running before opening the reports provided by the Avaya IP Telephony CDR extension pack.

Accessing the Avaya IP Telephony CDR Reports

To access the Avaya IP Telephony CDR 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 CDR** tab to view a list of the supported Avaya CDR Report formats.

4. You can click on any time frame displayed above each report to launch the specific report for that time frame. The supported time frames are as follows:

   - Hourly (**H**)—generates the report for an hour after the **Server Start Date/Time**.

   - Daily (**D**)—generates the report for a day after the **Server Start Date/Time**.

   - Weekly (**W**)—generates the report for a week after the **Server Start Date/Time**.

   - Monthly (**M**)—generates the report for a month after the **Server Start Date/Time**.

   Note: Server Start Date/Time represents the date and the time of the report generation as listed on the for the report.

   This generates the report based on the default metrics (**Call Duration (secs) (avg)**) with no Topology Filter selected.

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

   - Specify time controls

   - Specify topology filters

   - Specify metrics

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:

- **Server Start Date/Time**: set the date and time for report generation.

- **Time Range**: set the time range for report generation. The Start Date/Time changes automatically based on your selection for this field.

- **Auto Refresh**: set the auto refresh rate for the report to a specific interval or disable the auto refresh feature for the report.

- **Display Grain**: set the interval at which the report must represent data.

  Note: For the Avaya IP Telephony Reports, the minimum value you can specify for the display grain is one hour.

- **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.

To access the Time Controls page and specify the time controls, do as follows:

1. From any report that is displayed, click **Time Controls** from the menu. This displays the Time Controls page.

2. Select the time control that you want to specify and make the necessary changes.

3. Click **Confirm Selection** to select the topology filter and generate the report.

Click here to see the time controls you can specify for each report.

Report	Applicable Time Controls
Calendar	Server Start Date/Time, Time Range, Auto Refresh.
Chart Detail	Server Start Date/Time, Time Range, Display Grain, Auto Refresh, Hour of Day, Day of Week.
Heat Chart	Server Start Date/Time, Time Range, Auto Refresh, Hour of Day, Day of Week.
Most Changed	Server Start Date/Time, Time Range, Auto Refresh, Hour of Day, Day of Week.
Top N	Server Start Date/Time, Time Range, Display Grain, Auto Refresh, Hour of Day, Day of Week.
Managed Inventory	Server Start Date/Time, Time Range, Display Grain, Auto Refresh, Hour of Day, Day of Week.

The iSPI for IP Telephony marks the call metric data with a universal time stamp known as *seconds since epoch*, which directly reflects the Universal timestamp (in *seconds since epoch*) on the Avaya Communications Manager server that logged the call. The Network Performance Server (NPS) converts this timestamp into the local time as defined by the location of the NPS. If the Avaya Communications Manager server that logged the call is in a different time zone when compared to the time zone of the NPS or the iSPI for IP Telephony, the NPS data will not be in synchronization with the local time of the Avaya Communications Manager server.

Note that when you generate the reports, the NPS converts the time the call was handled by the Avaya Communications Manager server to the local time on the NPS. The reports display this converted time and not the time the call was handled by the Avaya Communications Manager server.

When configuring the iSPI for IP Telephony to access the CDR data on the Avaya Communications Manager server, you must specify the time zone of the Avaya Communications Manager server. The iSPI for IP Telephony uses this time zone information to correctly determine the universal timestamp (*seconds since epoch*) for the call origination time.

Specifying Topology Filters

Topology filters allow you to scope or filter the call metric reports based on the various combinations of the call attribute values available in the accumulated call metric data. For example, you can specify the topology filters based on a combination of certain specific values for the Communications Manager IP Address, Calling Party Number, Called Party Number, and so on. 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 [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 [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 [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 of the calls.

Call Attribute	Description
Communications Manager IP Address	The IP address of the Communication Manager server that handled the call.
Outbound Access Code Dialed	The access code dialed for calls outbound from the communication manager that handled the calls.
Outbound Trunk Group Access Code	The Trunk Group Access Code (TAC) of the outbound trunk group used by the communication manager that handled the outbound routing of the call.
Outbound Trunk Group	The outbound Trunk Group name or number used by the communication manager that handled the outbound routing of the call. If you do not see the required list of Trunk Group names or numbers in the selection list, verify that the Trunk Group Access Code (TAC) for all the trunk groups are displayed correctly by the iSPI for IP Telephony in the Trunk

Call Attribute	Description
	Group Detail Form. You can specify the correct TAC by editing the value in the Trunk Group Detail Form and saving the form (using the **Save and Close** button on the form). After saving the TAC, the next time the iSPI for IP Telephony processes such a call, the values Trunk Group Names or numbers are listed for you to select.
Outbound Trunk Group Member	The Trunk Group Member number used by communication manager that handled the outbound routing of the call.
Inbound Trunk Group Access Code	The Trunk Group Access Code (TAC) of the inbound trunk group used by the communication manager that handled the call at inbound.
Inbound Trunk Group	The inbound Trunk Group name or number used by the communication manager that handled the inbound call. If you do not see the required list of Trunk Group names or numbers in the selection list, verify that the Trunk Group Access Code (TAC) for all the trunk groups are displayed correctly by the iSPI for IP Telephony in the Trunk Group Detail Form. You can specify the correct TAC by editing the value in the Trunk Group Detail Form and saving the form (using the **Save and Close** button on the form). After saving the TAC, the next time the iSPI for IP Telephony processes such a call, the values Trunk Group Names or numbers are listed for you to select.
Inbound Trunk Group Member	The inbound Trunk Group Member number used by communication manager that handled the inbound call.
Calling Party Number	The number from where the call originated as registered by the communication manager that handled the call.
Called Party Number	The number to which the call was made as registered by the communication manager that handled the call.

Call Attribute	Description
Call Classification	The classification of the call. You can select any or all of the following options to filter information: • Inbound • Outbound • Tandem • Intra Switch • Unknown
Termination Reason	The reason for termination of the call.
Failed Call	Indicates whether a call terminated due to a failure condition. The possible values include the following: • No: signifies that the call did not terminate due to a failure condition. • Yes: signifies that call terminated due to a failure condition.
Failure Reason	The reason for the failure of the call.
Condition Code	An Avaya internal field that identifies the various aspects of a call.
Authorization Code	The authorization code used for outgoing calls.
Account Code	The account code used to associate call information to the specific account.
Call End Date	The date on which the call ended. Do not use this dimension or attribute when selecting the topology filters. Specification of filters using this field is not supported.
Call End Time	The time at which the call ended. Do not use this dimension or attribute when selecting the topology filters. Specification of filters using this field is not supported.

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 call attribute values in the **Selection** list. The list of attribute values are displayed based on all the call metric records available in the database at a given point of time. To select the specific attribute values for a call, make sure that an hour has elapsed on the network after the completion of the call.

• By default, the Topology Filters page lists only 5000 distinct values in the **Selection** list for a specific call 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.

Specifying Metrics for Reports

You can use the **Options** link to specify the call metrics or the call 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.

Call Metric	Description
[1]Call Duration	The call duration in seconds.
Sample Count	The sum of the sample count of calls. Indicates the count of calls.

Call Attribute Distinct Count	Description
Communications Manager IP Address (count-Distinct)	The distinct count of the Communications Manager IP Address, where Communications Manager IP Address represents the name of the call attribute.
Outbound Access Code Dialed (countDistinct)	The distinct count of the Outbound Access Code Dialed, where Outbound Access Code Dialed represents the name of the call attribute.
Outbound Trunk Group Access Code (count-Distinct)	The distinct count of the Outbound Trunk Group Access Code, where Outbound Trunk Group Access Code represents the name of the call attribute.
Outbound Trunk Group (countDistinct)	The distinct count of the Outbound Trunk Group, where Outbound Trunk Group represents the name of the call attribute.
Outbound Trunk Group Member (countDistinct)	The distinct count of the Outbound Trunk Group Member, where Outbound Trunk Group Member represents the name of the call attribute.
Inbound Trunk Group Access Code (countDistinct)	The distinct count of the Inbound Trunk Group Access Code, where Inbound Trunk Group Access Code represents the name of the call attribute.
Inbound Trunk Group (countDistinct)	The distinct count of the Inbound Trunk Group, where Inbound Trunk Group represents the name of the call attribute.
Inbound Trunk Group Member (countDistinct)	The distinct count of the Inbound Trunk Group Member, where Inbound Trunk Group Member represents the name of the call attribute.
Calling Party Number (countDistinct)	The distinct count of the Calling Party Number, where Calling Party Number represents the name of the call attribute.
Called Party Number (countDistinct)	The distinct count of the Called Party Number, where Called Party Number represents the name of the call attribute.

Call Metric	Description
Call Classification (countDistinct)	The distinct count of the Call Classification, where Call Classification represents the name of the call attribute.
Termination Reason (countDistinct)	The distinct count of the Termination Reason, where Termination Reason represents the name of the call attribute.
Failed Call (countDistinct)	The distinct count of the Failed Call, where Failed Call represents the name of the call attribute.
Failure Reason (countDistinct)	The distinct count of the Failure Reason, where Failure Reason represents the name of the call attribute.
Condition Code (countDistinct)	The distinct count of the Condition Code, where Condition Code represents the name of the call attribute.
Authorization Code (countDistinct)	The distinct count of the Authorization Code, where Authorization Code represents the name of the call attribute.
Account Code (countDistinct)	The distinct count of the Account Code, where Account Code represents the name of the call attribute.
Call End Date (countDistinct)	The distinct count of the Call End Date, where Call End Date represents the name of the call attribute.
Call End Time (countDistinct)	The distinct count of the Call End Time, where Call End Time represents the name of the call attribute.

[1]You can select any of the following options for the call duration metric:

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

Note: The distinct count of call attributes represents the sum of the occurrences of unique values for the call attributes. For example, if you select the Calling Party Number (countDistinct) metric, and three distinct calling parties had made calls during the time specified, the report lists the value for the Calling Party Number (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
- Managed Inventory

Chart Detail Report

This 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.

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 CDR Reports" (on page 7) 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 13) 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 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 Chart Detail 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 CDR Reports" (on page 7) 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 13) to specify the primary metric and the secondary metric for the report.

5. Click **Confirm Selection** to generate the report.

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 Busy Hour Call Attempts (BHCA) 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.

Top N Report

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

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**

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 CDR Reports" (on page 7) to launch the Top N report for a specific time frame.

2. Specify the time controls for the report as mentioned in the 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 pf 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 pf 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 pf 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 pf 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 pf 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 pf 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 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. 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 .

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 CDR Reports" (on page 7) 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.

Note: As this report compares the variations in the call metric values for two consecutive time frames, you must not select the **Until Now** option from the **Time Range** drop-down list accessible from the **Time Controls** link for this report. Selecting the **Until Now** option results in an error and displays the following message:

```
This report does not operate with the current time interval. Please modify your
selection.
```

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 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.

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 CDR Reports" (on page 7) 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 13) to specify the primary metric and the secondary metric for the report.

5. Click **Confirm Selection** to generate the report.

Managed Inventory Report

You can use the managed inventory report to view the number of unique values of each call attribute present in the call data within the selected time frame. For example, if you run the report for the last one day, you can see the number of communication managers that had call activity for the past one day.

You can click the **Topology Filter** link to filter the data to create a report that represents data for calls that match the filter criteria you selected. This report lists all the possible call attributes for the calls in a tabular format. The **Count** column of the table indicates the distinct values for each call attribute for the number of calls that occurred during the specified time frame. For example, the value 5 for the call attribute, **Communications Manager IP Address**, indicates that all calls during the time frame specified were handled by five different communication managers.

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

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

1. Perform the steps in the section"Accessing the Avaya IP Telephony CDR Reports" (on page 7) to launch the Managed Inventory 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. Click **Confirm Selection** to generate the report.

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