



CAR Device Reports Configuration

CAR provides reporting capabilities for three levels of users: Administrators, managers, and individual users. Only administrators generate device reports.

Device reports track the load and performance of Cisco CallManager-related devices, such as conference bridges, voice-mail server, and gateways.

This chapter contains the following topics:

- [Configuring Gateway Reports, page 18-1](#)
- [Configuring Conference Bridge Utilization Reports, page 18-15](#)
- [Configuring Voice Mail Utilization Reports, page 18-17](#)

Configuring Gateway Reports

Configure the following device reports for gateways:

- Gateway detail
- Gateway summary
- Gateway utilization
- Route group utilization
- Route list utilization
- Route pattern utilization

Gateway Detail Report Configuration

Only CAR administrators generate the gateway detail report. Use the gateway detail report to track issues with specific gateways.

This section describes how to generate, view, or mail detailed information about selected gateways.



Caution

Use CAR only during off-peak hours. Otherwise, data collection and report generation could cause performance degradation on the Cisco CallManager system.

Procedure

Step 1 Choose **Device Reports > Gateway > Detail**.

The Gateway Detail window displays.

Step 2 To choose the type of gateway that you want included in the report, click **Gateway Types** in the column on the left side of the window.

A list of gateway types displays. To specify only those gateways that use a particular route pattern, rather than a gateway type, click **Route Patterns** in the column on the left side of the window.

Step 3 Choose a gateway type from the list.

The gateway name displays in the List of Gateways box.

Step 4 In the List of Gateways box, choose the gateways that you want to include in the report.

Step 5 Click the down arrow icon to move the chosen gateway to the list of Selected Gateways box.



Note To add all the gateways to the list of Selected Gateways box, click **Select All** and the down arrow icon. To remove all gateways, click **Clear All**.

Step 6 In the Select Call Types area, check the check boxes for the types of calls that you want included in the report. [Table 18-1](#) describes the call types.

Table 18-1 Gateway Details by Call Types

Call Type	Description
Local	Local calls that are routed through the public switched telephone network (PSTN) to numbers without an area code or that include one of the local area codes.
Long Distance	Long-distance calls originating in the Cisco CallManager network going out through the PSTN.
International	International calls originating in the Cisco CallManager network going out through the PSTN.
On Net	Outgoing, intercluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.
Incoming	Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and went into the Cisco CallManager network.
Tandem	Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and were transferred outbound from the Cisco CallManager network through a gateway.
Others	All other outgoing calls, such as toll-free numbers or emergency calls such as 911.

- Step 7** In the Select QoS area, check the check boxes for the voice-quality categories that you want included in the report. The parameters set in the [Defining the Quality of Service \(QoS\) Values, page 15-9](#), provides basis for all voice-quality categories.

Table 18-2 Gateway Detail Voice Quality

Voice Quality	Description
Good	QoS for these calls represents the highest possible quality.
Acceptable	QoS for these calls, although slightly degraded, still falls within an acceptable range.
Fair	QoS for these calls is degraded but still within a usable range.
Poor	QoS for these calls is unsatisfactory.
NA	These calls did not match any criteria for the established QoS categories.

Step 8 Choose the date range for the period for which you want to see call information.

Step 9 If you want the report in CSV format, choose CSV (comma separated value) in the Report Format area. If you want the report in PDF format, choose PDF (portable document format) in the Report Format area.

You can view CSV files in CAR or save them to disk and view them using a spreadsheet application such as Microsoft Excel; you can view PDF files in CAR using Adobe Acrobat Reader.

Step 10 Click the **View Report** button.

If you chose CSV, the report generates, and you are prompted to view the file or to save it to disk. If you chose PDF, the report displays.

Step 11 If you want to mail the report, click the **Send Report** button. To send the report, follow the procedure described in [Mailing a Report, page 16-20](#).

Related Topics

- [Gateway Detail Report Results, page A-19](#)

Gateway Summary Report Configuration

Only CAR administrators generate the gateway summary report. This report provides a summary of all the calls that went through the gateways. You can use this information for monitoring the traffic and QoS for calls through the gateways.

You can either view reports that the system automatically generates or generate new reports. Only CAR administrators can schedule reports for automatic generation. See [CAR System Configuration, page 14-1](#), for more information.



Caution

Use CAR only during off-peak hours. Otherwise, data collection and report generation could cause performance degradation on the Cisco CallManager system.

This section describes how to generate, view, or mail summary information about gateways.

Procedure

- Step 1** Choose **Device Reports > Gateway > Summary**.
- The Gateway Summary window displays.
- Step 2** In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.
- Step 3** In the Select Call Types area, check the check boxes for the types of calls that you want included in the report. [Table 18-3](#) describes the call types.

Table 18-3 Gateway Details by Call Types

Call Type	Description
Incoming	Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and went into the Cisco CallManager network.
Tandem	Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and were transferred outbound from the Cisco CallManager network through a gateway.
Outgoing	All outbound calls that originate from a Cisco IP phone and terminate in a gateway.

Step 4 If you chose **Generate New Report**, choose the date range of the period for which you want to generate the report.

Step 5 If you want the report in CSV format, choose **CSV** (comma separated value) in the **Report Format** area. If you want the report in PDF format, choose **PDF** (portable document format) in the **Report Format** area.

You can view CSV files in CAR or save them to disk and view them using a spreadsheet application such as Microsoft Excel; you can view PDF files in CAR using Adobe Acrobat Reader.

Step 6 Click the **View Report** button.

If you chose CSV, the report generates, and you are prompted to view the file or to save it to disk. If you chose PDF, the report displays.

Step 7 If you want to mail the report, click the **Send Report** button. To send the report, follow the procedure described in [Mailing a Report, page 16-20](#).

Related Topic

- [Gateway Summary Report Results, page A-20](#)

Gateway Utilization Reports Configuration

Only CAR administrators generate the gateway utilization report. The report provides an estimate of the utilization percentage of the gateway for the period, and not the exact utilization. For example, the utilization of a gateway between 11hrs-12hrs, is calculated as (number of calls in the 5 minutes interval that used the gateway *100) / (maximum number of calls possible using the gateway at any time). Maximum number of calls possible using the gateway at any time = maximum number of ports for the gateway as configured in the CAR Gateway Configuration page. After calculating the utilization for each 5 minutes sample for the whole one hour duration, the maximum utilization value found for that one hour would be displayed in the report as the utilization for the time between 11hrs-12hrs. Similarly, to get a utilization for the whole day, the whole day is divided into samples of 5 minutes each and maximum utilization is calculated. You can examine the usage based on each hour of a day or on a specified number of days for each week or month. Reports generate for each of the gateways selected.

You can either view reports that the system automatically generates or generate new reports. Only CAR administrators can schedule reports for automatic generation. See [CAR System Configuration, page 14-1](#), for more information.



Caution

Use CAR only during off-peak hours. Otherwise, data collection and report generation could cause performance degradation on the Cisco CallManager system.

This section describes how to generate, view, or mail gateway utilization reports.

Procedure

- Step 1** Choose **Device Reports > Gateway > Gateway Utilization**.
The Gateway Utilization window displays.
- Step 2** In the Generate Reports field, choose a time as described in [Table 18-4](#).

Table 18-4 Generate Report Fields

Parameter	Description
Hour of Day	Displays the cumulative results for each hour in a 24-hour period for the period that you specify in Step 8 .
Day of Week	Displays the days of the week that occur within the period that you specify in Step 8 .
Day of Month	Displays the days of the month that occur within the period that you specify in Step 8 .

- Step 3** In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.
- Step 4** To choose the type of gateway that you want included in the report, click **Gateway Types** in the column on the left side of the window.
- A list of gateway types displays. To specify only those gateways that use a particular route pattern, rather than a gateway type, click **Route Patterns** in the column on the left side of the window.
- Step 5** Choose a gateway type from the list.
- The gateway name displays in the List of Gateways box.
- Step 6** In the List of Gateways box, choose the gateways that you want to include in the report.
- Step 7** Click the down arrow icon to move the chosen gateway to the list of Selected Gateways box.
- Step 8** If you chose Generate New Report, enter the date range of the period for which you want to see call information.
- Step 9** If you want the report in CSV format, choose CSV (comma separated value) in the Report Format area. If you want the report in PDF format, choose PDF (portable document format) in the Report Format area.
- You can view CSV files in CAR or save them to disk and view them using a spreadsheet application such as Microsoft Excel; you can view PDF files in CAR using Adobe Acrobat Reader.

Step 10 Click the **View Report** button.

If you chose CSV, the report generates, and you are prompted to view the file or to save it to disk. If you chose PDF, the report displays.

Step 11 If you want to mail the report, click the **Send Report** button. To send the report, follow the procedure described in [Mailing a Report, page 16-20](#).

Related Topic

- [Gateway and Route Utilization Report Results, page A-22](#)

Route Group Utilization Reports Configuration

Only CAR administrators generate the route group utilization report. This report provides an estimate of the maximum utilization percentage of the route group (cumulative utilization of all the gateways under the route group) for the period, and not the exact utilization. The utilization is calculated in the same way as it is done for Gateway Utilization, but this gives cumulative utilization of all the gateways under the route group. You can examine the usage based on each hour of a day or on a specified number of days for each week or month. Reports generates for each of the selected route groups.

You can either view reports that the system automatically generates or generate new reports. Only CAR administrators can schedule reports for automatic generation. See [CAR System Configuration, page 14-1](#), for more information.



Caution

Use CAR only during off-peak hours. Otherwise, data collection and report generation could cause performance degradation on the Cisco CallManager system.

This section describes how to generate, view, or mail route group utilization reports.

Procedure

Step 1 Choose **Device Reports > Gateway > Route Group Utilization**.

The Route Group Utilization window displays.

- Step 2** In the Generate Report field, choose a time as described in [Table 18-5](#).

Table 18-5 Generate Report Fields

Parameter	Description
Hour of Day	Displays the cumulative results for each hour in a 24-hour period for the period that you specify in Step 8 .
Day of Week	Displays the days of the week that occur within the period that you specify in Step 8 .
Day of Month	Displays the days of the month that occur within the period that you specify in Step 8 .

- Step 3** In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.
- Step 4** To choose the type of gateway that you want included in the report, click **Gateway Types** in the column on the left side of the window.
- A list of gateway types displays. To specify only those gateways that use a particular route pattern, rather than a gateway type, click **Route Patterns** in the column on the left side of the window.
- Step 5** Choose a gateway type from the list.
- The gateway name displays in the List of Gateways box.
- Step 6** In the List of Gateways box, choose the gateways that you want to include in the report.
- Step 7** Click the down arrow icon to move the chosen gateway to the list of Selected Gateways box.
- Step 8** If you chose Generate New Report, enter the date range of the period for which you want to see call information.
- Step 9** If you want the report in CSV format, choose CSV (comma separated value) in the Report Format area. If you want the report in PDF format, choose PDF (portable document format) in the Report Format area.

You can view CSV files in CAR or save them to disk and view them using a spreadsheet application such as Microsoft Excel; you can view PDF files in CAR using Adobe Acrobat Reader.

Step 10 Click the **View Report** button.

If you chose CSV, the report generates, and you are prompted to view the file or to save it to disk. If you chose PDF, the report displays.

Step 11 If you want to mail the report, click the **Send Report** button. To send the report, follow the procedure described in [Mailing a Report, page 16-20](#).

Related Topic

- [Gateway and Route Utilization Report Results, page A-22](#)

Route List Utilization Report Configuration

Only CAR administrators generate the route list utilization report. The route list utilization report provides an estimate of the maximum utilization percentage of the route list (cumulative utilization of all the gateways under the route list) for the period, and not the exact utilization. The utilization is calculated in the same way as it is done for Gateway Utilization, but this gives cumulative utilization of all the gateways under the route list.

You can examine the usage based on each hour of a day or on a specified number of days for each week or month. Reports generate for each of the selected route lists.

You can either view reports that the system automatically generates or generate new reports. Only CAR administrators can schedule reports for automatic generation. See [System Scheduler Configuration, page 14-11](#), for more information.



Caution

Use CAR only during off-peak hours. Otherwise, data collection and report generation could cause performance degradation on the Cisco CallManager system.

This section describes how to generate, view, or mail route list utilization reports.

Procedure

- Step 1** Choose **Device Reports > Gateway > Route List Utilization**.
The Route List Utilization window displays.
- Step 2** In the Generate Report field, choose a time as described in [Table 18-6](#).

Table 18-6 *Generate Report Fields*

Parameter	Description
Hour of Day	Displays the cumulative results for each hour in a 24-hour period for the period that you specify in Step 8 .
Day of Week	Displays the days of the week that occur within the period that you specify in Step 8 .
Day of Month	Displays the days of the month that occur within the period that you specify in Step 8 .

- Step 3** In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.
- Step 4** To choose the type of gateway that you want included in the report, click **Gateway Types** in the column on the left side of the window.
A list of gateway types displays. To specify only those gateways that use a particular route pattern, rather than a gateway type, click **Route Patterns** in the column on the left side of the window.
- Step 5** Choose a gateway type from the list.
The gateway name displays in the List of Gateways box.
- Step 6** In the List of Gateways box, choose the gateways that you want to include in the report.
- Step 7** Click the down arrow icon to move the chosen gateway to the list of Selected Gateways box.
- Step 8** If you chose Generate New Report, enter the date range of the period for which you want to see call information.

- Step 9** If you want the report in CSV format, choose CSV (comma separated value) in the Report Format area. If you want the report in PDF format, choose PDF (portable document format) in the Report Format area.
- You can view CSV files in CAR or save them to disk and view them using a spreadsheet application such as Microsoft Excel; you can view PDF files in CAR using Adobe Acrobat Reader.
- Step 10** Click the **View Report** button.
- If you chose CSV, the report generates, and you are prompted to view the file or to save it to disk. If you chose PDF, the report displays.
- Step 11** If you want to mail the report, click the **Send Report** button. To send the report, follow the procedure described in [Mailing a Report, page 16-20](#).
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Related Topic

- [Gateway and Route Utilization Report Results, page A-22](#)

Route Pattern Utilization Report Configuration

Only CAR administrators generate the route pattern utilization report. The report provides an estimate of the maximum utilization percentage of the route pattern (cumulative utilization of all the gateways under the route pattern) for the period, and not the exact utilization. The utilization is calculated in the same way as it is done for Gateway Utilization, but this gives cumulative utilization of all the gateways under the route pattern. You can examine the usage based on each hour of a day or on a specified number of days for each week or month. Reports generate for each of the selected route patterns.

You can either view reports that the system automatically generates or generate new reports. Only CAR administrators can schedule reports for automatic generation. See [System Scheduler Configuration, page 14-11](#), for more information.



Caution

Use CAR only during off-peak hours. Otherwise, data collection and report generation could cause performance degradation on the Cisco CallManager system.

This section describes how to generate, view, or mail route pattern utilization reports.

Procedure

Step 1 Choose **Device Reports > Gateway > Route Pattern Utilization**.

The Route Pattern Utilization window displays.

Step 2 In the Generate Report field, choose a time as described in [Table 18-7](#).

Table 18-7 *Generate Report Fields*

Parameter	Description
Hour of Day	Displays the cumulative results for each hour in a 24-hour period for the period that you specify in Step 8 .
Day of Week	Displays the days of the week that occur within the period that you specify in Step 8 .
Day of Month	Displays the days of the month that occur within the period that you specify in Step 8 .

Step 3 In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.

Step 4 To choose the type of gateway that you want included in the report, click **Gateway Types** in the column on the left side of the window.

A list of gateway types displays. To specify only those gateways that use a particular route pattern, rather than a gateway type, click **Route Patterns** in the column on the left side of the window.

Step 5 Choose a gateway type from the list.

The gateway name displays in the List of Gateways box.

Step 6 In the List of Gateways box, choose the gateways that you want to include in the report.

Step 7 Click the down arrow icon to move the chosen gateway to the list of Selected Gateways box.

- Step 8** If you chose **Generate New Report**, enter the date range of the period for which you want to see call information.
- Step 9** If you want the report in CSV format, choose **CSV** (comma separated value) in the **Report Format** area. If you want the report in PDF format, choose **PDF** (portable document format) in the **Report Format** area.
- You can view CSV files in CAR or save them to disk and view them using a spreadsheet application such as Microsoft Excel; you can view PDF files in CAR using Adobe Acrobat Reader.
- Step 10** Click the **View Report** button.
- If you chose CSV, the report generates, and you are prompted to view the file or to save it to disk. If you chose PDF, the report displays.
- Step 11** If you want to mail the report, click the **Send Report** button. To send the report, follow the procedure described in [Mailing a Report, page 16-20](#).
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Related Topic

- [Gateway and Route Utilization Report Results, page A-22](#)

Configuring Conference Bridge Utilization Reports

Only CAR administrators generate the conference bridge utilization report. The report provides an estimate of the maximum utilization percentage of the Conference Bridges (cumulative utilization of all the Conference Bridges in the system) for the period, and not the exact utilization. For example, the utilization of a Conference Bridge between 11hrs-12hrs is calculated by sampling the one hour duration into 5 minutes of equal samples. Then the utilization for each 5 minutes is calculated as (number of calls in the 5 minute interval that used the conference bridge *100) / (maximum number of calls the conference bridge can handle at any time). After calculating the utilization for each 5 minute sample for the whole one hour duration, the maximum utilization value found for that one hour is shown in the report as the utilization for the time between 11hrs-12hrs. You can examine the usage based on each hour of a day or on a specified number of days for each week or month. Reports generate for each conference bridge.

You can either view reports that the system automatically generates or generate new reports. Only CAR administrators can schedule reports for automatic generation. See [System Scheduler Configuration, page 14-11](#), for more information.

**Caution**

Use CAR only during off-peak hours. Otherwise, data collection and report generation could cause performance degradation on the Cisco CallManager system.

This section describes how to generate, view, or mail conference bridge utilization reports.

Procedure

- Step 1** Choose **Device Reports > Conference Bridge > Utilization**.
The Conference Bridge Utilization window displays.
- Step 2** In the Generate Report field, choose a time as described in [Table 18-8](#).

Table 18-8 Generate Report Fields

Parameter	Description
Hour of Day	Displays the cumulative results for each hour in a 24-hour period for the period that you specify in Step 4 .
Day of Week	Displays the days of the week that occur within the period that you specify in Step 4 .
Day of Month	Displays the days of the month that occur within the period that you specify in Step 4 .

- Step 3** In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.
- Step 4** If you chose Generate New Report, enter the date range of the period for which you want to see call information.

- Step 5** If you want the report in CSV format, choose CSV (comma separated value) in the Report Format area. If you want the report in PDF format, choose PDF (portable document format) in the Report Format area.
- You can view CSV files in CAR or save them to disk and view them using a spreadsheet application such as Microsoft Excel; you can view PDF files in CAR using Adobe Acrobat Reader.
- Step 6** Click the **View Report** button.
- If you chose CSV, the report generates, and you are prompted to view the file or to save it to disk. If you chose PDF, the report displays.
- Step 7** If you want to mail the report, click the **Send Report** button. To send the report, follow the procedure described in [Mailing a Report, page 16-20](#).
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Related Topics

- [Conference Bridge Utilization Report Results, page A-23](#)

Configuring Voice Mail Utilization Reports

Only CAR administrators generate the voice mail utilization report. The report provides an estimate of the maximum utilization percentage of the voice mail devices for the period, and not the exact utilization. For example, the utilization of a voice mail device between 11hrs-12hrs is calculated by sampling the one hour duration into 5 minutes of equal samples. Then the utilization for each 5 minutes is calculated as (number of calls in the 5 minute interval that used the voice mail devices *100) / (maximum number of calls the voice mail devices can handle at any time). After calculating the utilization for each 5 minute sample for the whole one hour duration, the maximum utilization value found for that one hour is shown in the report as the utilization for the time between 11hrs-12hrs. Similarly, to get a utilization for the whole day, the whole day is divided into samples of 5 minutes each and maximum utilization is calculated. You can examine the usage based on each hour of a day or on a specified number of days for each week or month. Reports are generated for each voice-mail server.

You can either view reports that have been automatically generated by the system or generate new reports. Only CAR administrators can schedule reports for automatic generation. See [System Scheduler Configuration, page 14-11](#), for more information.

**Note**

The CAR voice mail utilization report only supports Cisco uOne, Unity, and Octel Voicemail gateway.

**Caution**

Use CAR only during off-peak hours. Otherwise, data collection and report generation could cause performance degradation on the Cisco CallManager system.

This section describes how to generate, mail, or view voice mail utilization reports.

Procedure

- Step 1** Choose **Device Reports > Voice Mail > Utilization**.
The Voice Mail Utilization window displays.
- Step 2** In the Generate Report field, choose a time as described in [Table 18-9](#).

Table 18-9 *Generate Report Fields*

Parameter	Description
Hour of Day	Displays the cumulative results for each hour in a 24-hour period for the period that you specify in Step 4 .
Day of Week	Displays the days of the week that occur within the period that you specify in Step 4 .
Day of Month	Displays the days of the month that occur within the period that you specify in Step 4 .

- Step 3** In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.
- Step 4** If you chose Generate New Report, enter the date range of the period for which you want to see call information.
- Step 5** If you want the report in CSV format, choose CSV (comma separated value) in the Report Format area. If you want the report in PDF format, choose PDF (portable document format) in the Report Format area.
- You can view CSV files in CAR or save them to disk and view them using a spreadsheet application such as Microsoft Excel; you can view PDF files in CAR using Adobe Acrobat Reader.
- Step 6** Click the **View Report** button.
- If you chose CSV, the report generates, and you are prompted to view the file or to save it to disk. If you chose PDF, the report displays.
- Step 7** If you want to mail the report, click the **Send Report** button. To send the report, follow the procedure described in [Mailing a Report, page 16-20](#).
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Related Topic

- [Voice Mail Utilization Report Results, page A-23](#)

■ **Configuring Voice Mail Utilization Reports**