



CAR System Reports Configuration

CAR provides reporting capabilities for three levels of users:

- Administrators—Generate system reports to help with load balancing, system performance, and troubleshooting.
- Managers—Generate reports for users, departments, and QoS to help with call monitoring for budgeting or security purposes, and for determining the voice quality of the calls.
- Individual users—Generate a billing report for their calls.

This chapter contains the following topics:

- [Configuring QoS Reports, page 17-2](#)
- [Configuring QoS Parameters, page 17-7](#)
- [Configuring Traffic Summary, page 17-13](#)
- [Configuring Traffic Summary by Extensions, page 17-17](#)
- [Configuring System Overview, page 17-19](#)
- [Configuring CDR Error, page 17-21](#)
- [QoS Parameter Operators, page 17-22](#)



Note

Depending on your job function, you may not have access to every report described in this help.

Configuring QoS Reports

Only CAR administrators generate the QoS detail report. The report details the QoS ratings attributed to inbound and outbound calls on the Cisco CallManager network for the period specified.

Managers or CAR administrators generate the QoS summary report. The report provides a three-dimensional pie chart showing the distribution of QoS grades achieved for the specified call classifications and period. The report also provides a table summarizing the calls for each QoS. The call details in CDRs and CMRs and the QoS parameters provided in the [Defining the Quality of Service \(QoS\) Values, page 15-9](#), provide basis for assigning a call a particular voice quality category.

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.

QoS Detail Report Configuration

**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 detailed information about the system QoS.

Procedure

- Step 1** Choose **System Reports > QoS > Detail**.
The QoS Detail window displays.
- Step 2** In the Select Call Types area, check the check boxes for the types of calls that you want included in the report. [Table 17-1](#) describes the call types.

Table 17-1 QoS Detail Report Call Types

Call Type	Description
Internal	Intracuster calls that originated in the Cisco CallManager network and ended in the same Cisco CallManager network (no gateways are used).
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 3** 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](#), provide basis for all voice quality categories.

Table 17-2 QoS Detail Report 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 4** Choose the date range for the period for which you want to see QoS information.
- Step 5** In the Select Users field, you can either select all users or search for particular users.
- Step 6** To select all users, check the Select All Users check box.
- Step 7** To select individual users, enter the user ID of the individual in the User ID field.
- Step 8** Click the **Add** button.
- Step 9** You can also use a provided search function. See [Searching for Users, page 16-21](#).
- Step 10** 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 11** 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 12** 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

- [QoS Detail Report Results, page A-8](#)
- [Defining the Quality of Service \(QoS\) Values, page 15-9](#)
- [QoS Summary Report Configuration, page 17-5](#)

QoS Summary Report Configuration



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 the system QoS.

Procedure

- Step 1** If you are a manager, choose **QoS > Summary** and continue with [Step 3](#). If you are a CAR administrator, proceed to [Step 2](#).
- The QoS Summary window displays.
- Step 2** If you are a CAR administrator, choose **System Reports > QoS > Summary**.
- The QoS Summary window displays.
- Step 3** In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.
- Step 4** In the Select Call Types area, check the check boxes for the types of calls that you want included in the report. [Table 17-3](#) describes the call types.

Table 17-3 QoS Summary Report Call Types

Call Type	Description
Internal	Intracenter calls that originated in the Cisco CallManager network and ended in the same Cisco CallManager network (no gateways are used).
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 5** If you chose Generate New Report in [Step 3](#), choose the date range for the period for which you want to generate the report.
- Step 6** 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 7** Click the **View Report** button.
- If you chose CSV, the report generates, and you are prompted to view the file or save it to disk. If you chose PDF, the report displays.
- Step 8** 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

- [QoS Detail Report Configuration, page 17-2](#)
- [QoS Summary Report Results, page A-10](#)
- [Defining the Quality of Service \(QoS\) Values, page 15-9](#)

Configuring QoS Parameters

Only CAR administrators generate the QoS by gateway report. The report provides the percentage of calls satisfying the selected QoS criteria for a period specified for the selected gateways.

Only CAR administrators generate the QoS by call types report. The report provides jitter, latency, and lost packet information for a period specified for all calls of a chosen type.

QoS By Gateway Configuration



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 QoS information about all chosen gateways.

Before You Begin

Configure the gateway using the procedures in [Gateway Configuration](#), page 14-8.

Procedure

- Step 1** Choose **System Reports > QoS Parameter > By Gateway**.
The QoS based on Gateways window displays.
- Step 2** In the Generate Report field, choose a time as described in [Table 17-4](#).

Table 17-4 *Generate Report Fields*

Parameter	Description
Hour of Day	Displays the percentage of the calls, for each selected gateway, satisfying the QoS criteria for the period that you specify in Step 6 . The percentage results show for hour of day.

Table 17-4 Generate Report Fields (continued)

Parameter	Description
Day of Week	Displays the percentage of the calls, for each selected gateway, satisfying the QoS criteria for the period that you specify in Step 6 . The percentage results show for day of week.
Day of Month	Displays the percentage of the calls, for each selected gateway, satisfying the QoS criteria for the period that you specify in Step 6 . The percentage results show for day of month.

- Step 3** In the Jitter field, choose the operator that you want to use and enter the value for jitter. See [QoS Parameter Operators, page 17-22](#), for descriptions of operators.
- Step 4** In the Latency field, choose the operator that you want to use and enter the value for latency. See [QoS Parameter Operators, page 17-22](#), for descriptions of operators.
- Step 5** In the Lost Packets field, choose the operator that you want to use and enter the value for number of lost packets. See [QoS Parameter Operators, page 17-22](#), for descriptions of operators.
- Step 6** Choose the date range of the period for which you want to see call information.
- Step 7** 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.
To choose a gateways that uses a particular route pattern, rather than a gateway type, click **Route Patterns** in the column on the left side of the window.
- Step 8** Choose a gateway type from the list.
The gateway name displays in the List of Gateways box.
- Step 9** In the List of Gateways box, choose the gateways that you want to include in the report.
- Step 10** Click the down arrow icon to move the chosen gateway to the list of Selected Gateways box.

- Step 11** 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 12** 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 13** 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

- [QoS by Gateways Report Results, page A-12](#)
- [QoS Parameter Operators, page 17-22](#)
- [QoS By Call Types Configuration, page 17-10](#)

QoS By Call Types Configuration

This section describes how to generate, view, or mail QoS information about all calls of a certain type.



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 **System Reports > QoS Parameter > By Call Types**.
- The QoS based on Call Types window displays.
- Step 2** In the Generate Report field, choose a time as described in [Table 17-5](#).

Table 17-5 Generate Report Fields

Parameter	Description
Hour of Day	Displays the percentage of the calls, for each call type, satisfying the QoS criteria for the period that you specify in Step 7 . The percentage results show for hour of day.
Day of Week	Displays the percentage of the calls, for each call type, satisfying the QoS criteria for the period that you specify in Step 7 . The percentage results show for day of week.
Day of Month	Displays the percentage of the calls, for each call type, satisfying the QoS criteria for the period that you specify in Step 7 . The percentage results show for day of month.

- Step 3** In the Jitter field, choose the operator that you want to use and enter the value for jitter. See [QoS Parameter Operators, page 17-22](#), for descriptions of operators.
- Step 4** In the Latency field, choose the operator that you want to use and enter the value for latency. See [QoS Parameter Operators, page 17-22](#), for descriptions of operators.
- Step 5** In the Lost Packets field, choose the operator that you want to use and enter the value for number of lost packets. See [QoS Parameter Operators, page 17-22](#), for descriptions of operators.
- 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 17-6](#) describes the call types.

Table 17-6 QoS Parameters by Call Types

Call Type	Description
Internal	Intracenter calls that originated in the Cisco CallManager network and ended in the same Cisco CallManager network (no gateways are used).
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** Choose the date range for the period for which you want to see call information.
- Step 8** 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 9** 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 10** 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

- [QoS by Call Types Report Results, page A-12](#)
- [QoS Parameter Operators, page 17-22](#)
- [QoS By Gateway Configuration, page 17-8](#)

Configuring Traffic Summary

Only CAR administrators generate the traffic summary report. The report provides a information about the call volume for a period that you specify.

You can either view reports that the system automatically generates or generate new reports. 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 summary information about system traffic.

Procedure

- Step 1** Choose **System Reports > Traffic Summary**.
The Traffic Summary window displays.
- Step 2** In the Generate Report field, choose a time as described in [Table 17-7](#).

Table 17-7 Generate Report Fields

Parameter	Description
Hour of Day	Displays the average calls in the system for the period that you specify in Step 6 for hour of day.
Day of Week	Displays the average calls in the system for the period that you specify in Step 6 for day of week.
Day of Month	Displays the average calls in the system for the period that you specify in Step 6 for day of month.

- Step 3** In the Available Reports field, choose an automatically generated report (if available) or use the default Generate New Report.
- Step 4** In the Select Call Types area, check the check boxes for the types of calls that you want included in the report. [Table 17-8](#) describes the call types.

Table 17-8 Traffic Summary by Call Types

Call Type	Description
Internal	Intracluster calls that originated in the Cisco CallManager network and ended in the same Cisco CallManager network (no gateways are used).
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.

Table 17-8 Traffic Summary by Call Types (continued)

Call Type	Description
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 5** 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](#), provide basis for all voice-quality categories.

Table 17-9 QoS Detail Report 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 6 If you chose **Generate New Report** in [Step 3](#), choose the date range for the period for which you want to generate the report.

Step 7 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 8 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 9 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

- [Traffic Summary Report Results, page A-14](#)
- [Configuring Traffic Summary by Extensions, page 17-17](#)

Configuring Traffic Summary by Extensions

Only CAR administrators generate the traffic summary by extensions report. The report provides information about the call volume for a period and set of extensions that you specify.

This section describes how to generate, view, or mail a traffic summary report based on user extensions.

**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 **System Reports > Traffic Summary (Extn)**.
The Traffic Summary based on Extension(s) window displays.
- Step 2** In the Generate Report field, choose a time as described in [Table 17-10](#).

Table 17-10 Generate Report Fields

Parameter	Description
Hour of Day	Displays the average calls in the system for the selected extension numbers for the date range selected for hour of day.
Day of Week	Displays the average calls in the system for the selected extension numbers for the date range selected for day of week.
Day of Month	Displays the average calls in the system for the selected extension numbers for the date range selected for day of month.

- Step 3** In the Select Call Types area, check the check boxes for the types of calls you want included in the report. [Table 17-11](#) describes the call types.

Table 17-11 Traffic Summary (Extn) by Call Types

Call Type	Description
Internal	Intracenter calls that originated in the Cisco CallManager network and ended in the same Cisco CallManager network (no gateways are used).
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.
Others	All other outgoing calls, such as toll-free numbers or emergency calls such as 911.

- Step 4** In the Select Extensions field, you can either choose all extensions or search for extensions based on users.
- Step 5** To choose all extensions, check the Select All Extensions check box.

- Step 6** To choose extensions based on users, enter the extension number of the individual in the Extension field.
- Step 7** Click the **Add Extension** button.
- Step 8** You can also use a provided search function.
- 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 Topics

- [Traffic Summary Report Results, page A-14](#)
- [Configuring Traffic Summary, page 17-13](#)

Configuring System Overview

Only CAR administrators generate the system overview report that provides the entire set of system reports in one report.

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 summary information about the Cisco CallManager system.

Procedure

Step 1 Choose **System Reports > System Overview**.

The System Overview 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 If you chose Generate New Report, choose the date range for the period for which you want to generate the report.

Step 4 From the List of Reports, choose the reports that you want generated by highlighting the report and clicking the right arrow icon.

The reports you chose appear in the Selected Reports list box.



Tip

You can highlight more than one report at a time by holding down the Ctrl key on your keyboard while clicking the reports.

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

- [System Overview Report Results, page A-16](#)

- [Enabling or Customizing Reports for Automatic Generation, page 15-12](#)

Configuring CDR Error

Only CAR administrators generate the CDR error report. The report provides statistics for the number of error records in the CAR Billing_Error table and the reason for the errors.

This section describes how to generate, view, or mail information about CDR errors.



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 **System Reports > CDR Error**.

The CDR Error window displays.

Step 2 Choose the date range of the period for which you want to generate the report.

Step 3 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 4 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 5 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

- [CDR Error Report Results, page A-18](#)

QoS Parameter Operators

Table 17-12 describes the QoS parameter operators.

Table 17-12 QoS Parameter Operators

Operator	Description
>=	Select this operator to generate jitter, latency, or lost packet data that is greater than or equal to the specified value.
=	Select this operator to generate jitter, latency, or lost packet data that is equal to the specified value.
<=	Select this operator to generate jitter, latency, or lost packet data that is less than or equal to the specified value.
N.A.	Select this operator to preclude jitter, latency, or lost packet data.
Between	Select this operator to generate jitter, latency, or lost packet data that occurs between one value and another value. When you choose this operator, a second field displays, so you can set the start and end values.