



System Reports

ART provides reporting capabilities for three levels of users.

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

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

System reports are provided for managers and ART administrators. You can generate reports on demand, or if you are an administrator, you can schedule reports for automatic generation. If you are an ART administrator, see [Scheduling Reports, page 2-32](#), for more information.

Reports can be viewed in comma separated values (CSV) format or portable document format (PDF). If you choose PDF, you must have Adobe Acrobat Reader installed on your machine. You can download a free copy of Acrobat Reader from the Welcome window in ART (**Help > About ART**).

The QoS summary report can be accessed by managers or ART administrators. All other reports can be accessed by ART administrators only. This chapter describes the following reports:

- [QoS Detail](#)—available for ART administrators
- [QoS Summary](#)—available for managers and ART administrators
- [QoS By Gateway](#)—available for ART administrators

- [QoS By Call Types](#)—available for ART administrators
- [Traffic Summary](#)—available for ART administrators
- [Traffic Summary by Extensions](#)—available for ART administrators
- [System Overview](#)—available for ART administrators
- [CDR Error](#)—available for ART administrators

This chapter also includes information to help you understand the report output.

Related Topics

- [Understanding Report Results, page 4-105](#)
- [Mailing a Report, page 3-79](#)
- [Searching for User Information, page 3-80](#)

QoS Detail

The QoS detail report can be generated by ART administrators only. The report details the QoS ratings attributed to inbound and outbound calls on the Cisco CallManager network for the time period you specify.



Tip

Use this report to help monitor the voice quality of all calls on a user-level basis for the entire system.

Assigning a call a particular voice quality category is based on the call details in CDRs and CMRs and the QOS parameters you provide in the [“Define Quality of Service \(QoS\) Values”](#) section on page 2-57.



Note

For information about the report results, see [Understanding the QoS Detail Report Results](#).



Caution

Use ART only during off-peak hours. Otherwise, data collection and ad-hoc reports could cause performance degradation on Cisco CallManager.

Use the following instructions to generate, view, or mail detailed information about your system QoS.

Procedure

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- Step 1** Open ART. See the [“Opening ART — ART Administrators”](#) section on page 1-12 for instructions on how to open ART.
- Step 2** Click **System Reports > QoS > Detail**.
- The QoS Detail window displays.
- Step 3** In the **Select Call Types** area, check the boxes for the types of calls you want included in the report.
- On Net—Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.
 - Internal—Intra-cluster 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 which 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.
 - Incoming—Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.
 - Tandem—Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
 - Others—All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.
- Step 4** In the **Select QoS** area, check the boxes for the voice quality categories you want included in the report. All voice quality categories are based on the parameters set in the [“Define Quality of Service \(QoS\) Values”](#) section on page 2-57.

- Good—QoS for these calls was the highest possible quality.
- Acceptable—QoS for these calls was slightly degraded but still within an acceptable range.
- Fair—QoS for these calls was degraded but still within a usable range.
- Poor—QoS for these calls was unsatisfactory.
- NA—These calls did not match any of the criteria for the established QoS categories.

- Step 5** Choose the date range for the period for which you want to see QoS information.
- Step 6** Select the user(s) you want included in the report. You can check the **Select All Users** box to include all users. You can specify individual users by typing the user ID of the individual you want to include in the report in the User ID field and then clicking **Add**. A search function is also provided. See [Searching for User Information, page 3-80](#), for instructions on using the search feature.
- Step 7** In the **Report Format** area, choose either **CSV** or **PDF**. CSV files can be viewed in ART or saved to disk and viewed using Microsoft Excel or other spreadsheet applications; PDF files can be viewed in ART using Adobe Acrobat Reader.
- Step 8** Click **View Report**. If you chose CSV, the report is generated and you are prompted to view the file or save it to disk. If you chose PDF, the report displays. See [Understanding Report Results, page 4-105](#), for information about the report. You can also mail the report by clicking **Send Report**. If you want to send the report, see [Mailing a Report, page 3-79](#), for instructions.
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Related Topics

- [Understanding the QoS Detail Report Results, page 4-105](#)
- [Define Quality of Service \(QoS\) Values, page 2-57](#)

QoS Summary

The QoS summary report can be generated by managers or ART administrators. The report provides a three-dimensional pie chart showing the distribution of QOS grades achieved for the specified call classifications and time period. The report also provides a table summarizing the calls for each QOS. Assigning a call

a particular voice quality category is based on the call details in CDRs and CMRs and the QoS parameters you provide in the “[Define Quality of Service \(QoS\) Values](#)” section on page 2-57.

**Tip**

Use this report to monitor network performance.

**Note**

For information about the report results, see [Understanding the QoS Summary Report Results](#).

You can either view reports that have been automatically generated by the system or generate new reports. Only ART administrators can schedule reports for automatic generation. See [Scheduling Reports, page 2-32](#), for more information.

**Caution**

Use ART only during off-peak hours. Otherwise, data collection and ad-hoc reports could cause performance degradation on Cisco CallManager.

Use the following instructions to generate, view, or mail summary information about your system QoS.

Procedure

-
- Step 1** Open ART. See the “[Opening ART — ART Administrators](#)” section on page 1-12 for instructions on how to open ART.
- Step 2** If you are a manager, click **QoS > Summary**.
If you are an ART administrator, click **System Reports > QoS > Summary**.
- Step 3** In the **Available Reports** field, select an automatically generated report (if available), or use the default **Generate New Report**.
- Step 4** In the **Select Call Types** area, check the boxes for the types of calls you want included in the report.
- On Net—Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.

- **Internal**—Intra-cluster 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 which 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.
- **Incoming**—Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.
- **Tandem**—Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
- **Others**—All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.

- Step 5** In the **Available Reports** field, select an automatically generated report (if available), or use the default **Generate New Report**.
- Step 6** If you selected **Generate New Report** in Step 5, choose the date range for the period for which you want to generate the report.
- Step 7** In the **Report Format** area, choose either comma separated values (CSV) or portable document format (PDF). CSV files can be viewed in ART or saved to disk and viewed using Microsoft Excel or other spreadsheet applications; PDF files can be viewed in ART using Adobe Acrobat Reader.
- Step 8** Click **View Report**. If you chose CSV, the report is generated and you are prompted to view the file or save it to disk. If you chose PDF, the report displays. See [Understanding the QoS Summary Report Results, page 4-107](#), for information about the report. You can also mail the report by clicking **Send Report**. If you want to send the report, see [Mailing a Report, page 3-79](#), for instructions.
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Related Topics

- [QoS Detail, page 4-88](#)
- [Understanding the QoS Summary Report Results, page 4-107](#)

QoS By Gateway

The QoS by gateway report can only be generated by ART administrators. The report provides jitter, latency, and lost packet information for a time period you specify for all gateways of a selected type. This report can be generated by ART administrators only. This report helps you select a gateway and check the QoS values for the gateway.

**Note**

For information about the report results, see [Understanding the QoS by Gateways Report Results](#).

**Caution**

Use ART only during off-peak hours. Otherwise, data collection and ad-hoc reports could cause performance degradation on Cisco CallManager.

Use the following instructions to generate, view, or mail QoS information about all selected gateways.

Before You Begin

Be sure the gateways have been configured in the [“Gateway Configuration” section on page 2-24](#).

Procedure

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- Step 1** Open ART. See the [“Opening ART — ART Administrators” section on page 1-12](#) for instructions on how to open ART.
 - Step 2** Click **System Reports > QoS Parameter > By Gateway**.
The QoS based on Gateways window displays.
 - Step 3** In the **Generate Report** field, select one of the following:

- Hour of Day—displays the cumulative results for each hour in a 24-hour period for the time period you specify in Step 7.
- Day of Week—displays the days of the week that occur within the time period you specify in Step 7.
- Day of Month—displays the days of the month that occur within the time period you specify in Step 7.

Step 4 In the **Jitter** field, select the operator you want to use, and enter the value for jitter. See [QoS Parameter Operators, page 4-109](#), for descriptions of operators.

Step 5 In the **Latency** field, select the operator you want to use, and enter the value for latency. See [QoS Parameter Operators, page 4-109](#), for descriptions of operators.

Step 6 In the **Lost Packets** field, select the operator you want to use, and enter the value for number of lost packets. See [QoS Parameter Operators, page 4-109](#), for descriptions of operators.

Step 7 Choose the date range for the period for which you want to see call information.

Step 8 Select the type of gateway you want included in the report. In the column on the left, click **Gateway Types** to display a list of gateway types.

If you prefer, you can specify only those gateways that use a particular route pattern, rather than a gateway type. Selected gateways that use the selected route patterns are the only devices that will be returned in the report results. Click **Route Patterns** in the column on the left to display a list of gateways that use the selected route pattern.

Step 9 In the **List of Gateways** box, select the gateways you want to include in the report. You can select multiple gateways by pressing the **Control** key as you click.

Step 10 Click **Add** to move the selected gateway(s) to the list of Selected Gateways. Only the specific gateways listed in the Selected Gateways list box will be included in the report.

Step 11 Repeat Steps 9 and 10 until all the gateways you want to include in the report are listed in the Selected Gateways box.

Step 12 In the **Report Format** area, choose either **CSV** or **PDF**. CSV files can be viewed in ART or saved to disk and viewed using Microsoft Excel or other spreadsheet applications; PDF files can be viewed in ART using Adobe Acrobat Reader.

Step 13 Click **View Report**. If you chose CSV, the report is generated and you are prompted to view the file or save it to disk. If you chose PDF, the report displays. See [Understanding the QoS by Gateways Report Results, page 4-110](#), for

information about the report. You can also mail the report by clicking **Send Report**. If you want to send the report, see [Mailing a Report, page 3-79](#), for instructions.

Related Topics

- [Understanding the QoS by Gateways Report Results, page 4-110](#)
- [QoS Parameter Operators, page 4-109](#)

QoS By Call Types

The QoS by call types report can only be generated by ART administrators. The report provides jitter, latency, and lost packet information for a time period you specify for all calls of a selected type.



Tip

Use this report to monitor general QoS for your system.

Use the following instructions to generate, view, or mail QoS information about all calls of a certain type.



Note

For information about the report results, see [Understanding the QoS by Call Types Report Results](#).



Caution

Use ART only during off-peak hours. Otherwise, data collection and ad-hoc reports could cause performance degradation on Cisco CallManager.

Procedure

Step 1 Open ART. See the [“Opening ART — ART Administrators” section on page 1-12](#) for instructions on how to open ART.

Step 2 Click **System Reports > QoS Parameter > By Call Types**.

The QoS based on Call Types window displays.

- Step 3** In the **Generate Report** field, select one of the following:
- Hour of Day—displays the cumulative results for each hour in a 24-hour period for the time period you specify in Step 8.
 - Day of Week—displays the days of the week that occur within the time period you specify in Step 8.
 - Day of Month—displays the days of the month that occur within the time period you specify in Step 8.
- Step 4** In the **Jitter** field, select the operator you want to use, and enter the value for jitter. See [QoS Parameter Operators, page 4-109](#), for descriptions of operators.
- Step 5** In the **Latency** field, select the operator you want to use, and enter the value for latency. See [QoS Parameter Operators, page 4-109](#), for descriptions of operators.
- Step 6** In the **Lost Packets** field, select the operator you want to use, and enter the value for number of lost packets. See [QoS Parameter Operators, page 4-109](#), for descriptions of operators.
- Step 7** In the **Select Call Types** area, check the boxes for the types of calls you want included in the report.
- On Net—Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.
 - Internal—Intra-cluster 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 which 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.
 - Incoming—Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.

- Tandem—Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
- Others—All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.

- Step 8** Choose the date range for the period for which you want to see call information.
- Step 9** In the **Report Format** area, choose either **CSV** or **PDF**. CSV files can be viewed in ART or saved to disk and viewed using Microsoft Excel or other spreadsheet applications; PDF files can be viewed in ART using Adobe Acrobat Reader.
- Step 10** Click **View Report**. If you chose CSV, the report is generated and you are prompted to view the file or save it to disk. If you chose PDF, the report displays. See [Understanding the QoS by Call Types Report Results, page 4-110](#), for information about the report. You can also mail the report by clicking **Send Report**. If you want to send the report, see [Mailing a Report, page 3-79](#), for instructions.

Related Topics

- [Understanding the QoS by Call Types Report Results, page 4-110](#)
- [QoS Parameter Operators, page 4-109](#)

Traffic Summary

The traffic summary report can only be generated by ART administrators. The report provides a information about the call volume for a time period you specify. You can include only those call types and QoS voice quality categories that you chose.



Tip

Use this report to determine the number of calls being made on an hourly or daily basis. This helps you identify high- and low-traffic patterns for capacity planning.

**Note**

For information about the report results, see [Understanding the Traffic Summary Report Results](#).

You can either view reports that have been automatically generated by the system or generate new reports. Only ART administrators can schedule reports for automatic generation. See [Scheduling Reports, page 2-32](#), for more information.

**Caution**

Use ART only during off-peak hours. Otherwise, data collection and ad-hoc reports could cause performance degradation on Cisco CallManager.

Use the following instructions to generate, view, or mail summary information about your system traffic.

Procedure

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- Step 1** Open ART. See the [“Opening ART — ART Administrators”](#) section on page 1-12 for instructions on how to open ART.
- Step 2** Click **System Reports > Traffic Summary**.
The Traffic Summary window displays.
- Step 3** In the **Generate Report** field, select one of the following:
- Hour of Day—displays the cumulative results for each hour in a 24-hour period for the time period you specify in Step 8.
 - Day of Week—displays the days of the week that occur within the time period you specify in Step 8.
 - Day of Month—displays the days of the month that occur within the time period you specify in Step 8.
- Step 4** In the **Available Reports** field, select an automatically generated report (if available), or use the default **Generate New Report**.
- Step 5** In the **Select Call Types** area, check the boxes for the types of calls you want included in the report.
- On Net—Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.

- **Internal**—Intra-cluster 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 which 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.
- **Incoming**—Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.
- **Tandem**—Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
- **Others**—All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.

Step 6 In the **Select QoS** area, check the boxes for the voice quality categories you want included in the report. All voice quality categories are based on the parameters set in the [“Define Quality of Service \(QoS\) Values”](#) section on page 2-57.

- **Good**—QoS for these calls was the highest possible quality.
- **Acceptable**—QoS for these calls was slightly degraded but still within an acceptable range.
- **Fair**—QoS for these calls was degraded but still within a usable range.
- **Poor**—QoS for these calls was unsatisfactory.
- **NA**—These calls did not match any of the criteria for the established QoS categories.

Step 7 If you selected Generate New Report in Step 5, choose the date range for the period for which you want to generate the report.

- Step 8** In the **Report Format** area, choose either comma separated values (CSV) or portable document format (PDF). CSV files can be viewed in ART or saved to disk and viewed using Microsoft Excel or other spreadsheet applications; PDF files can be viewed in ART using Adobe Acrobat Reader.
- Step 9** Click **View Report**. If you chose CSV, the report is generated and you are prompted to view the file or save it to disk. If you chose PDF, the report displays. See [Understanding the Traffic Summary Report Results, page 4-112](#), for information about the report. You can also mail the report by clicking **Send Report**. If you want to send the report, see [Mailing a Report, page 3-79](#), for instructions.
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Related Topics

- [Understanding the Traffic Summary Report Results, page 4-112](#)
- [Traffic Summary by Extensions, page 4-100](#)

Traffic Summary by Extensions

The traffic summary by extensions report can only be generated by ART administrators. The report provides a information about the call volume for a time period and set of extensions you specify. You can include only those call types and extensions that you chose.



Tip

You can use this report to track call usage by a specified group of users, by a department, or by another criteria, such as lobby phones or conference room phones. This report helps you determine high-usage users or groups by aggregating the usage level across the users you specify.

Use the following instructions to generate, view, or mail a traffic summary report based on user extensions.



Note

For information about the report results, see [Understanding the Traffic Summary Report Results](#).

**Caution**

Use ART only during off-peak hours. Otherwise, data collection and ad-hoc reports could cause performance degradation on Cisco CallManager.

Procedure

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- Step 1** Open ART. See the [“Opening ART — ART Administrators”](#) section on page 1-12 for instructions on how to open ART.
- Step 2** Click **System Reports > Traffic Summary(Extn)**.
The Traffic Summary based on Extension(s) window displays.
- Step 3** In the **Generate Report** field, select one of the following:
- **Hour of Day**—displays the cumulative results for each hour in a 24-hour period for the time period you specify in Step 8.
 - **Day of Week**—displays the days of the week that occur within the time period you specify in Step 8.
 - **Day of Month**—displays the days of the month that occur within the time period you specify in Step 8.
- Step 4** In the **Select Call Types** area, check the boxes for the types of calls you want included in the report.
- **On Net**—Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.
 - **Internal**—Intra-cluster 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 which 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.

- **Incoming**—Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.
- **Tandem**—Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
- **Others**—All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.

Step 5 Select the extension(s) you want included in the report. You can check the **Select All Extensions** box to include all extensions. You can specify individual extensions by typing the extension number you want to include in the report in the Extension field and then clicking **Add Extension**. A search function is also provided. See [Searching for User Information, page 3-80](#), for instructions on using the search feature.

Step 6 In the **Report Format** area, choose either comma separated values (CSV) or portable document format (PDF). CSV files can be viewed in ART or saved to disk and viewed using Microsoft Excel or other spreadsheet applications; PDF files can be viewed in ART using Adobe Acrobat Reader.

Step 7 Click **View Report**. If you chose CSV, the report is generated and you are prompted to view the file or save it to disk. If you chose PDF, the report displays. See [Understanding the Traffic Summary Report Results, page 4-112](#), for information about the report. You can also mail the report by clicking **Send Report**. If you want to send the report, see [Mailing a Report, page 3-79](#), for instructions.

Related Topics

- [Understanding the Traffic Summary Report Results, page 4-112](#)
- [Traffic Summary, page 4-97](#)

System Overview

The system overview report can only be generated by ART administrators. The report provides the entire set of system reports in a single report.

**Tip**

Use this report to see a high-level picture of the Cisco CallManager network.

You can either view reports that have been automatically generated by the system or generate new reports. Only ART administrators can schedule reports for automatic generation. See [Scheduling Reports, page 2-32](#), for more information.

**Note**

For information about the report results, see [Understanding the System Overview Report Results](#).

**Caution**

Use ART only during off-peak hours. Otherwise, data collection and ad-hoc reports could cause performance degradation on Cisco CallManager.

Use the following instructions to generate, view, or mail summary information about the Cisco CallManager system.

Procedure

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- Step 1** Open ART. See the “[Opening ART — ART Administrators](#)” section on page 1-12 for instructions on how to open ART.
- Step 2** Click **System Reports > Traffic Summary(Extn)**.
The System Overview window displays.
- Step 3** In the **Available Reports** field, select an automatically generated report (if available), or use the default **Generate New Report**.
- Step 4** If you selected Generate New Report in Step 3, choose the date range for the period for which you want to generate the report.
- Step 5** In the **Report Format** area, choose either comma separated values (CSV) or portable document format (PDF). CSV files can be viewed in ART or saved to disk and viewed using Microsoft Excel or other spreadsheet applications; PDF files can be viewed in ART using Adobe Acrobat Reader.
- Step 6** Click **View Report**. If you chose CSV, the report is generated and you are prompted to view the file or save it to disk. If you chose PDF, the report displays. See [Understanding the System Overview Report Results, page 4-113](#), for

information about the report. You can also mail the report by clicking **Send Report**. If you want to send the report, see [Mailing a Report, page 3-79](#), for instructions.

Related Topics

[Understanding the System Overview Report Results, page 4-113](#)

CDR Error

The CDR error report can only be generated by ART administrators. The report provides statistics for the number of error records in the ART Billing_Error table and the reason for the errors.



Tip

Use this report to determine if any errors occurred when loading CDRs, or when you notice incomplete CDR data in the reports. For example, if you are missing codec information in the reports, you can run a CDR error report to ascertain whether the Codec_Master table encountered an error when loading into ART. This could alert you to a new codec that has been added or to database tampering. You can then fix the problem and load the CDR data again.

Use the following instructions to generate, view, or mail information about CDR errors.



Note

For information about the report results, see [Understanding the CDR Error Report Results](#).



Caution

Use ART only during off-peak hours. Otherwise, data collection and ad-hoc reports could cause performance degradation on Cisco CallManager.

Procedure

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- Step 1** Open ART. See the “[Opening ART — ART Administrators](#)” section on page 1-12 for instructions on how to open ART.
- Step 2** Click **System Reports > CDR Error**.
The CDR Error window displays.
- Step 3** Choose the date range for the period for which you want to generate the report.
- Step 4** In the **Report Format** area, choose either comma separated values (CSV) or portable document format (PDF). CSV files can be viewed in ART or saved to disk and viewed using Microsoft Excel or other spreadsheet applications; PDF files can be viewed in ART using Adobe Acrobat Reader.
- Step 5** Click **View Report**. If you chose CSV, the report is generated and you are prompted to view the file or save it to disk. If you chose PDF, the report displays. See [Understanding the CDR Error Report Results, page 4-115](#), for information about the report. You can also mail the report by clicking **Send Report**. If you want to send the report, see [Mailing a Report, page 3-79](#), for instructions.
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Related Topics

- [Understanding the CDR Error Report Results, page 4-115](#)

Understanding Report Results

The following sections provide report output information for each of the report types.

Understanding the QoS Detail Report Results

The QoS detail report includes the following fields.

Orig. Time	The time the call was placed, in 24-hour, minute, and second format.
Term. Time	The time the call disconnected, in 24-hour, minute, and second format.

Duration(s)	The amount of time, in seconds, that the call was connected.
Orig.	The originating number from which the call was placed
Dest.	The destination number to which the call was directed.
Call Classification—Calls are categorized into classes.	
On Net	Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.
Internal	Intra-cluster 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 which 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.
Incoming	Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.

Tandem	Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
Others	All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.
Orig. Codec	The codec used by the originating device.
Dest. Codec	The codec used by the destination device.
Orig. Device	The name of the device that placed the call.
Dest. Device	The name of the device that received the call.
Orig. QoS	The voice quality experienced by the device that placed the call.
Dest. QoS	The voice quality experienced by the device that received the call.

Understanding the QoS Summary Report Results

The QoS summary report includes the following fields.

Orig. Time	The time the call was placed, in 24-hour, minute, and second format.
Term. Time	The time the call disconnected, in 24-hour, minute, and second format.
Duration(s)	The amount of time, in seconds, that the call was connected.
Orig.	The originating number from which the call was placed

Dest.	The destination number to which the call was directed.
Call Classification—Calls are categorized into classes.	
On Net	Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.
Internal	Intra-cluster 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 which 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.
Incoming	Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.
Tandem	Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
Others	All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.

Orig. Codec	The codec used by the originating device.
Dest. Codec	The codec used by the destination device.
Orig. Device	The name of the device that placed the call.
Dest. Device	The name of the device that received the call.
Orig. QoS	The voice quality experienced by the device that placed the call.
Dest. QoS	The voice quality experienced by the device that received the call.

QoS Parameter Operators

The QoS parameter reports utilize the following operators.

>=	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.

Understanding the QoS by Gateways Report Results

The QoS by gateways report provides the following information.

Time	Indicates the cumulative hours of the day(s), the days of the week, or the days of the month for the selected date range.
% of Calls	Displays the percentage of calls for each of the gateways for the hours of the day, the days of the week, or the days of the month for the selected date range.

Understanding the QoS by Call Types Report Results

The QoS by call types report provides the following information.

Time	Indicates the cumulative hours of the day(s), the days of the week, or the days of the month for the selected date range.
% of Calls	The percentage of calls that were made during that time period for the entire selected date range.
On Net	Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.
Internal	Intra-cluster 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 which 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.
Incoming	Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.
Tandem	Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
Others	All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.
Total	The total number of calls for each hour or day.

Understanding the Traffic Summary Report Results

The traffic summary and traffic summary by extension reports provides some or all of the following information.

Time	Indicates the cumulative hours of the day(s), the days of the week, or the days of the month for the selected date range.
No of Calls	Shows the number of calls for each hour or day.
On Net	Outgoing, inter-cluster calls that originate on one Cisco CallManager cluster and terminate on a different cluster.
Internal	Intra-cluster 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 which 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.
Incoming	Inbound calls that originated outside the Cisco CallManager network, entered through a gateway, and into the Cisco CallManager network.

Tandem	Inbound calls that originated outside the Cisco CallManager network, entered the Cisco CallManager network through a gateway, and then were transferred outbound from the Cisco CallManager network through a gateway.
Others	All other outgoing calls, such as toll free numbers, emergency calls such as 911, and so on.
Total	The total number of calls for each hour or day.

Understanding the System Overview Report Results

The system overview provides information about all parts of the Cisco CallManager network. The report provides the following sections.

Top 5 Users based on Charge	Details the 5 users who have incurred the highest charges for calls that occurred during the specified date range. See Understanding the Top N By Charge or Duration Report Results, page 3-84 , for details about this section of the system overview report.
Top 5 Destinations based on Charge	Details the 5 called numbers that have incurred the highest charges for calls during the specified date range. See Understanding the Top N By Charge or Duration Report Results, page 3-84 , for details about this section of the system overview report.

Top 5 Calls based on Charge	Details the 5 calls that have incurred the highest charges for calls during the specified date range. See Understanding the Top N By Charge or Duration Report Results, page 3-84 , for details about this section of the system overview report.
Top 5 User based on Duration	Details the 5 users who have spent the most amount of time on calls during the specified date range. See Understanding the Top N By Charge or Duration Report Results, page 3-84 , for details about this section of the system overview report.
Top 5 Destinations based on Duration	Details the 5 called numbers that have been engaged in calls for the greatest amount of time during the specified date range. See Understanding the Top N By Charge or Duration Report Results, page 3-84 , for details about this section of the system overview report.
Top 5 Calls based on Duration	Details the 5 longest calls for the date range specified. See Understanding the Top N By Charge or Duration Report Results, page 3-84 , for details about this section of the system overview report.
Traffic Summary Report - Hour of Day	Shows the volume of calls during the specified date range based on each hour of the day. See Understanding the Traffic Summary Report Results, page 4-112 , for details about this section of the system overview report.

Traffic Summary Report - Day of Week	Shows the volume of calls during the specified date range based on each day of the week. See Understanding the Traffic Summary Report Results, page 4-112 , for details about this section of the system overview report.
Traffic Summary Report - Day of Month	Shows the volume of calls during the specified date range based on each day of the month. See Understanding the Traffic Summary Report Results, page 4-112 , for details about this section of the system overview report.
Quality of Service Report - Summary	Shows the number of calls that fell within each voice quality category during the specified date range. See Understanding the QoS Summary Report Results, page 4-107 , for details about this section of the system overview report.
Gateway Summary Report	Shows the summary of the call classification for each gateway along with the QoS, the number of calls and the duration for each classification for the gateway during the specified date range. See Gateway Summary, page 5-120 , for details about this section of the system overview report.

Understanding the CDR Error Report Results

The CDR error reports provides the following information.

Time	The hour for the specified day that the error occurred.
No of Error CDRS	The total number of CDR data records that were not processed during loading into ART due to an error.

No of Valid CDRs	The total number of CDR data records that were successfully loaded to ART.
% of Error CDRs	The percentage of failed CDR data records out of all the CDR data records to be loaded.
Error Description	An error that occurred when trying to load the CDR data records.
% of Each Error	The percentage of CDR data records that failed due to the corresponding error description.