



# Best Practices: NetIQ Analysis Center for VoIP

## A White Paper for Nortel CS1000

June 22, 2005

---

### Contents

<b>Overview: How Analysis Center works.....</b>	<b>1</b>
<b>Getting started with the console.....</b>	<b>2</b>
<b>Recommended Nortel CS1000 reports.....</b>	<b>8</b>
<b>Conclusion: Report planning and execution .....</b>	<b>12</b>
<b>Appendix A: Context tab functions .....</b>	<b>13</b>

The Nortel CS reporting package enhances the report creation and analysis capabilities of Analysis Center 2.0 SP 1 by providing flexible access to Nortel CS voice over IP (VoIP) data. With the reader-friendly formats of the Capacity Planning, Operational, and Service Levels reports, you can capture and distribute vital information, such as server availability, call activity trends and predictions for IP phone calls, real-time usage and performance, and Signaling Server and VGMC call quality.

This paper discusses the benefits inherent in reporting with Analysis Center, and highlights the steps you should take to get the most from Analysis Center in your Nortel CS1000 environment. The Nortel CS reports described inside can be added to Analysis Center by checking in the .xml files packaged in the Web downloadable file.

**Note:** This paper is intended to supplement, not replace, the Analysis Center *User Guide*.

THIS DOCUMENT AND THE SOFTWARE DESCRIBED IN THIS DOCUMENT ARE FURNISHED UNDER AND ARE SUBJECT TO THE TERMS OF A LICENSE AGREEMENT OR A NON-DISCLOSURE AGREEMENT. EXCEPT AS EXPRESSLY SET FORTH IN SUCH LICENSE AGREEMENT OR NON-DISCLOSURE AGREEMENT, NETIQ CORPORATION PROVIDES THIS DOCUMENT AND THE SOFTWARE DESCRIBED IN THIS DOCUMENT "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW DISCLAIMERS OF EXPRESS OR IMPLIED WARRANTIES IN CERTAIN TRANSACTIONS; THEREFORE, THIS STATEMENT MAY NOT APPLY TO YOU.

This document and the software described in this document may not be lent, sold, or given away without the prior written permission of NetIQ Corporation, except as otherwise permitted by law. Except as expressly set forth in such license agreement or non-disclosure agreement, no part of this document or the software described in this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, or otherwise, without the prior written consent of NetIQ Corporation. Some companies, names, and data in this document are used for illustration purposes and may not represent real companies, individuals, or data.

This document could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein. These changes may be incorporated in new editions of this document. NetIQ Corporation may make improvements in or changes to the software described in this document at any time.

**© 1995-2005 NetIQ Corporation, all rights reserved.**

U.S. Government Restricted Rights: If the software and documentation are being acquired by or on behalf of the U.S. Government or by a U.S. Government prime contractor or subcontractor (at any tier), in accordance with 48 C.F.R. 227.7202-4 (for Department of Defense (DOD) acquisitions) and 48 C.F.R. 2.101 and 12.212 (for non-DOD acquisitions), the government's rights in the software and documentation, including its rights to use, modify, reproduce, release, perform, display or disclose the software or documentation, will be subject in all respects to the commercial license rights and restrictions provided in the license agreement.

Check Point, FireWall-1, Provider-1, SiteManager-1, and VPN-1 are trademarks or registered trademarks of Check Point Software Technologies Ltd.

ActiveAgent, ActiveAnalytics, ActiveAudit, ActiveReporting, ADcheck, AppAnalyzer, Application Scanner, AppManager, AuditTrack, Chariot, ClusterTrends, CommerceTrends, Configuration Assessor, ConfigurationManager, the cube logo design, DBTrends, DiagnosticManager, Directory and Resource Administrator, Directory Security Administrator, Domain Migration Administrator, End2End, Exchange Administrator, Extended Management Pack, FastTrends, File Security Administrator, Firewall Appliance Analyzer, Firewall Reporting Center, Firewall Suite, Ganymede, the Ganymede logo, Ganymede Software, Group Policy Administrator, imMarshal, Intergreat, Knowledge Scripts, MailMarshal, Marshal, Migrate.Monitor.Manage, Mission Critical Software, Mission Critical Software for E-Business, the Mission Critical Software logo, MP3check, NetIQ, the NetIQ logo, the NetIQ Partner Network design, NetWare Migrator, OnePoint, the OnePoint logo, Operations Manager, PentaSafe, PSAudit, PSDetect, PSPasswordManager, PSSecure, Qcheck, RecoveryManager, Security Analyzer, Security Manager, Security Reporting Center, Server Consolidator, SQLcheck, VigilEnt, Visitor Mean Business, Vivinet, W logo, WebMarshal, WebTrends, WebTrends Analysis Suite, WebTrends for Content Management Systems, WebTrends Intelligence Suite, WebTrends Live, WebTrends Log Analyzer, WebTrends Network, WebTrends OLAP Manager, WebTrends Report Designer, WebTrends Reporting Center, WebTrends Warehouse, Work Smarter, WWWorld, and XMP are trademarks or registered trademarks of NetIQ Corporation or its subsidiaries in the United States and other jurisdictions. All other company and product names mentioned are used only for identification purposes and may be trademarks or registered trademarks of their respective companies.

---

## Overview: How Analysis Center works

Analysis Center is designed to import raw data from multiple AppManager repositories, transform that data into useful information about the computing infrastructure that supports your business, and publish that information in the form of reports.

In general terms, the Analysis Center architecture is a structure whereby data is copied from AppManager repositories to *Data Marts*, and from the Data Marts to the Analysis Center *Data Warehouse*. Queries of the Warehouse are made from the Analysis Center Console.

**Data Mart.** There is one Data Mart for each AppManager repository you identify as a source of raw data. A Data Mart serves several purposes:

- Data copied from the AppManager repository is stored for processing.
- Stored procedures process the copied data.
- Processed data is stored in fact and dimension tables.
- The fact tables function as a component of the Data Warehouse.

**Data Warehouse.** The Data Warehouse is made up of a *relational database* and a *multidimensional database*. The relational database (AC\_Warehouse) serves as the immediate source of data for the multidimensional database. The relational database is managed by SQL Server 2000, and contains, among other things, the dimensional data copied from the Data Marts and views linked to the fact tables in the Data Marts.

The multidimensional database (AC\_OLAP) is managed by SQL Server 2000 Analysis Services. Values are stored in *cubes* designed to facilitate the rapid query of large amounts of data. A cube is a structure that organizes data in *hierarchical dimensions*. Dimensions describe data from a particular point of view (for example, the computer and application from which it was generated, or the date and time during which it was generated). The hierarchical structure of dimensions lets you select data from any point in the hierarchy (for example, data for all machines, data for certain Server groups, or data for individual computers).

You use the **Context** tab of the Analysis Center Console to control the dimensions that will filter the data that you want to include in the report. We'll discuss the use of the **Context** tab in greater detail throughout the rest of this paper.

**SQL Server functions.** The SQL Server Agent on the Data Mart server reads from the AppManager repository and writes to the Data Mart and Data Warehouse relational databases. This process is facilitated by DTS packages that run as SQL jobs on the Data Mart server.

The SQL Server Agent on the Data Warehouse server creates and reads from the Data Mart databases, reads from and writes to the Data Warehouse relational databases, and processes the cube in the Data Warehouse multidimensional database. These activities are facilitated by DTS packages that run as SQL jobs on the Data Warehouse server.

---

# Getting started with the console

The following topics provide brief “how-tos” for working with Analysis Center for VoIP and Nortel CS.

- “Customizing an original report” [on page 2](#)
- “Understanding folders” [on page 6](#)
- “Deploying reports to Reporting Services” [on page 7](#)
- “Making the most of dashboards” [on page 7](#)

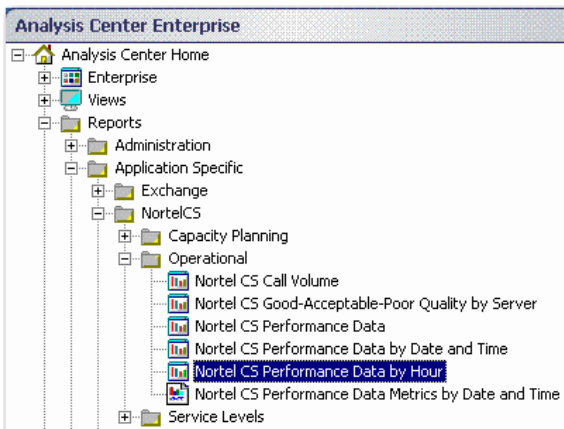
## Customizing an original report

Analysis Center includes a number of reports that you can use as-is or alter to suit your needs. These original reports are located under the **Reports** folder in the Navigation pane and are scattered throughout the various folders. In the following example, we’ll walk through the steps involved in altering one of the original reports to create a “Busy Hour” report.

**Tip:** Make sure that you’ve run the NortelCS\_SS\_CallQuality Knowledge Script in AppManager. That script supplies the data that your Busy Hour report will use.

**To create a Busy Hour report:**

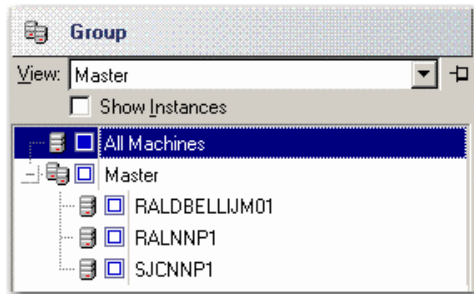
1. In the Navigation pane, navigate to the **Reports > Application Specific > NortelCS > Operational** folder and select **Nortel CS Performance Data by Hour**.



Notice that once you’ve selected a report, the **Context**, **Tasks**, and **Properties** tabs at the bottom of the Tasks pane, which is on the right side of the Console. The tabs don’t appear until after you’ve selected a report in the Navigation pane.

**Note:** To view a detailed description of the report, right-click on the report name and select **Configuration Card**. The Overview section contains a description of the report’s functions and frequently offers suggestions for customizing the report. The rest of the Configuration Card is a graphical representation of the configured contexts and parameters that make up the report.

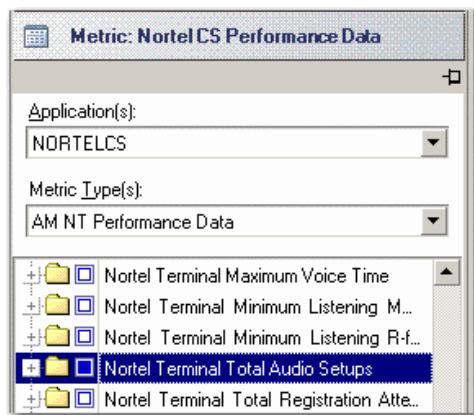
2. Click on the **Context** tab and select the Group context.



You use the Group context options to filter your subsequent context options by AppManager view and/or computers within that view.

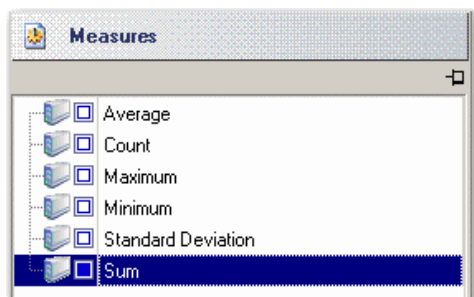
Click to select the view and computers that you want the Busy Hour report to represent. In our example, we've selected the **Master** view and **All Machines** within the view.

3. Select the Metric context, and then scroll to and select **Nortel Terminal Total Audio Setups**. Make sure that you deselect any default metric that may have been selected.



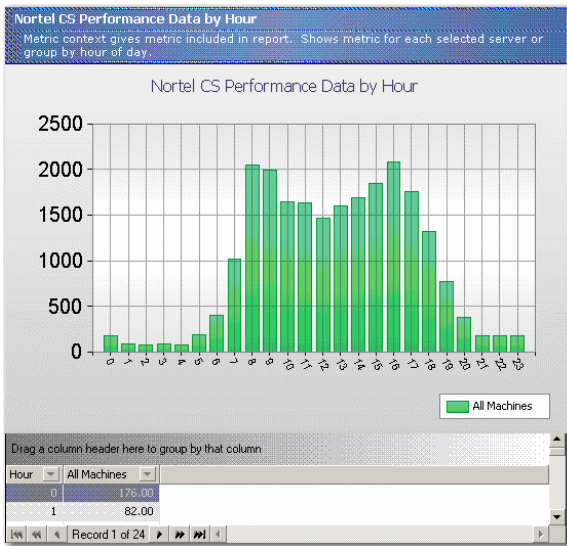
You use the Metric context options to define the data for your report. The selections that appear are related to AppManager Knowledge Script data stream legends.

4. Select the Measures context. The Measures context options allow you to determine the statistics that are used in the report. Because this report will reflect total volume, you'll want to select **Sum**, rather than Average, which is the default selection.



**Note:** If you want to change the time frame for your report, use the Time context. We won't be making any Time changes in this example.

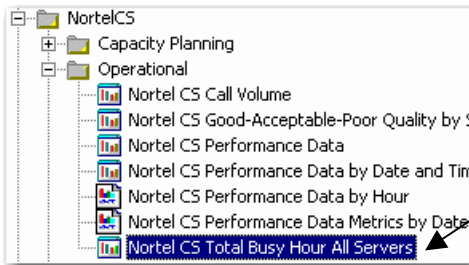
5. Click **Execute Report**. The customized report appears in the Results pane.



The x-axis reflects the hours of the day in military time. The y-axis reflects the total number of calls that occurred during each hour. From this report, you can easily see which hour of the day is your busiest.

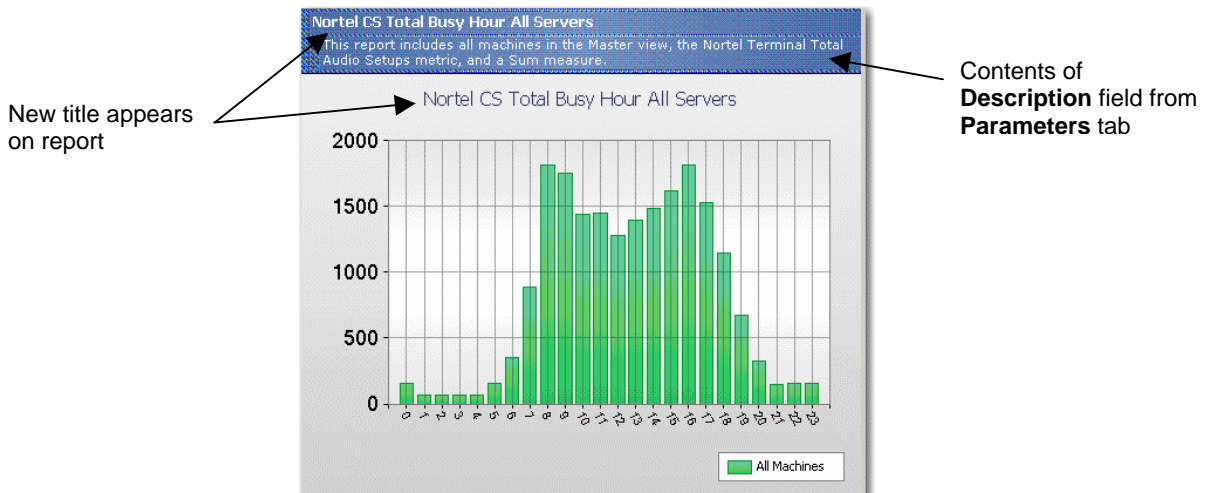
Once you've finished customizing the report, click **Report > Save Report As** to save with a new title under **Reports > Application Specific > Nortel CS > Operational**. Make the new title as explicit as possible — it should tell you exactly what purpose this report has.

You can't save a customized original report without giving it a new title. Once you've saved the report, it appears in the Navigation pane.



New report title appears in the Navigation pane.

The new title also appears on the customized report in the Report pane.



New title appears on report

Contents of **Description** field from **Parameters** tab

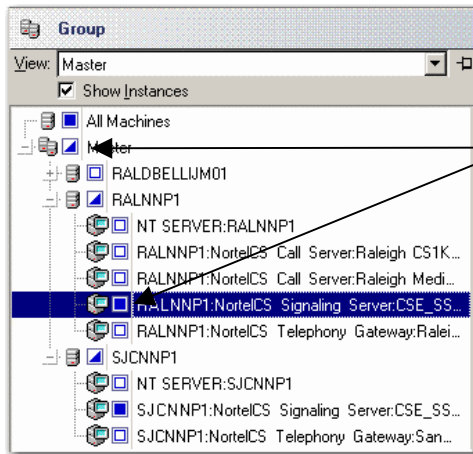
**Tip:** To make the report's function obvious to users, make good use of the **Description** field on the **Parameters** tab. Accurately describe what's shown in the report and include important parameters such as the range the report covers, the metric being used, and the machines being included. Although these parameters are apparent in the Analysis Center Console, they're not visible to users once the report is deployed to SQL Server 2000 Report Services.



Now that you've seen the total for all servers, you may want to see the breakdown of calls by individual Signaling Server.

1. Select the Group context. Leave **All Machines** checked, and then check the **Show Instances** box to reveal any Nortel CS application instances on proxy computers.

Expand each machine and select every Signaling Server instance.



Notice the variation in the selection nodes. For more information about the differences in Context nodes, see the appendix.

2. Click on the **Properties** tab. You use the **Properties** tab to set miscellaneous report properties such as chart style. Because this version of the Busy Hour report will display data for several Signaling Servers, you'll probably want to change the chart style from **Column**, which is the default, to **Line**, which is more suited to displaying data from multiple sources.

Scroll down the list of properties and change the **ChartType** property to **Line**.



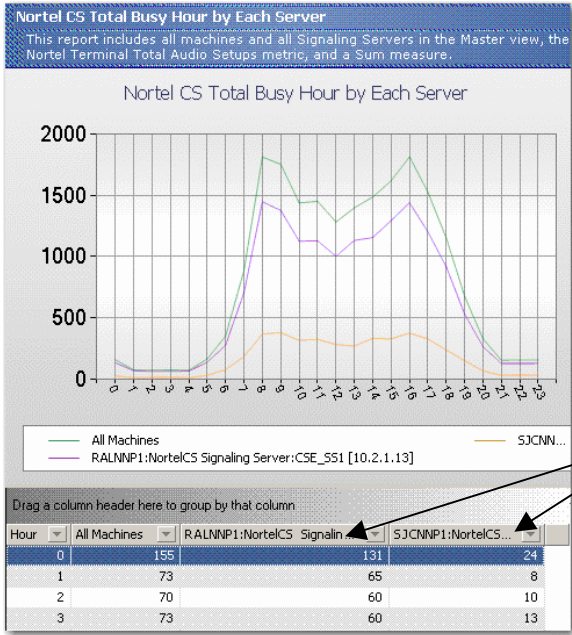
With the options on the **Properties** tab, you can also change other properties such as **NumericFormat**, which controls the number of digits that are displayed after a decimal point. To display whole numbers, change the **NumericFormat** property from **F2** to **F0**.



3. Click **Execute Report**. The customized report appears in the Results pane.

The x-axis reflects the hours of the day in military time. The y-axis reflects the total number of calls that occurred during each hour. Calls for each Signaling Server are reflected by a line on the graph, as are the total calls for All Machines. From this report, you can easily see which hour of the day is the busiest for each of your Signaling Servers.

Once you've finished customizing the report, click **Report > Save Report As** to save it with a new title. Don't forget to change the report's description on the **Parameters** tab.



Notice the breakdown of calls per Signaling Server

## Understanding folders

In the Navigation pane, folders are containers in which you can keep the reports that you create. You can use the folders to sort reports by report function (such as Service Levels), by the application that you're monitoring, by the recipient of the report (such as a specific administrator or business unit), or by myriad other factors that suit your VoIP needs.

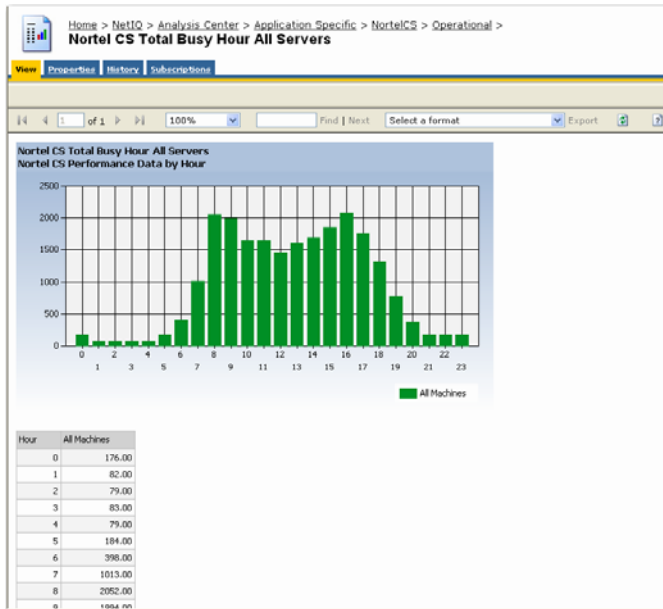
We recommend that you create a folder called "Temporary," "In-progress," "Staging," or some other title that indicates that the folder is a container for reports that are not yet ready for "prime-time." You can leave an in-progress report in the temporary folder as long you need, until you're done making all of the context changes necessary to produce a report that's exactly what you want. With a temporary folder, you can save a report that's not quite finished, come back to it later, and not have to wonder where you saved it. When you've finished the report, you can save it in the permanent folder in which it belongs.

Details about creating, moving, renaming, and deleting folders are described in the *Analysis Center User Guide*.

## Deploying reports to Reporting Services

Analysis Center employs SQL Server 2000 Reporting Services to deliver reports that provide up-to-the-minute analyses of your VoIP environment. Once you've configured a report to provide the information in which you are interested, you can then deploy that report to SQL Server 2000 Reporting Services to have it run periodically on the schedule you choose, and have each iteration of the report delivered via subscription (by email or written to a file share) to one or more users. If you don't want to deliver a report by subscription methods, you can allow users to view the report using Web browser access to SQL Server 2000 Reporting Services.

The deployed version of the Busy Hour report you generated looks like this:



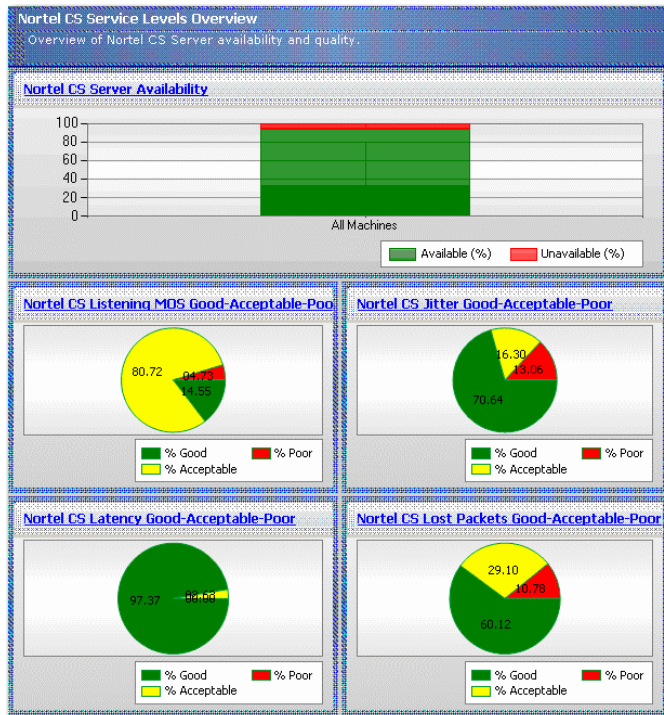
For detailed instructions on deploying reports, refer to the Analysis Center *User Guide*.

## Making the most of dashboards

Dashboards allow you to group a number of reports together on the same page, which makes it easy to see related data at a glance. For your convenience, Analysis Center contains a Service Levels report called Nortel CS Service Levels Overview, which you'll find in the Service Levels folder in the Navigation pane. This dashboard report displays a grouping of five separate Service Levels reports:

- Nortel CS Server Availability
- Nortel CS Listening MOS Good-Acceptable-Poor
- Nortel CS Jitter Good-Acceptable-Poor
- Nortel CS Latency Good-Acceptable-Poor
- Nortel CS Lost Packets Good-Acceptable-Poor

If you change a report in a dashboard, and then redeploy the report, you also need to redeploy the dashboard report.



You are not limited to this single preconfigured dashboard report. Create as many as you find useful for yourself and other users. For detailed instructions on creating a dashboard report, refer to the Analysis Center *User Guide*.

---

## Recommended Nortel CS1000 reports

In your Nortel CS1000 environment there are certain metrics that you must monitor in order to keep your phones up and working and your users happy with call quality and telephone service, which is undoubtedly the most mission-critical application running on your company's network. An analysis of the metrics created by the activity in your VoIP environment can provide volume trend and prediction information that you can use for capacity planning and IT support.

We recommend that you create, run, and deploy reports in the following categories. You'll find original reports in these categories within the **Reports > Application Specific > Nortel CS** folders in the Navigation pane. These original reports have been configured to filter for Nortel data, so you can use them pretty much right out of the box.

- "Service Levels" on page 9
- "Operational" on page 10
- "Capacity Planning" on page 12

## Service Levels

The reporting capability of Analysis Center enables organizations to demonstrate the value of IT and how well IT is aligned with business objectives. To these ends, run the following Service Level management reports to reflect server availability and call quality.

**Note:** Thresholds for good and poor performance are set using the Threshold parameters on the **Properties** tab. You can change the thresholds if the default values do not match the levels used by your organization.



Parameters	
Good Operator	<
Good Standard	40
Poor Operator	>
Poor Standard	60

- *Nortel CS Server Availability.* Use this report to create an overview of the availability of all Nortel CS servers: Call Servers, Signaling Servers, Media Gateways, and VGMCs. This report uses the availability data collected by the AppManager NortelCS\_HealthCheck Knowledge Script. You can use the Nortel Call Server Availability data stream to reflect availability data for Media Gateways. By default, this report shows the availability of all servers.

You can use this report to create an Operational report that shows the availability of each server. This type of Operational report is extremely valuable for isolating which servers are experiencing problems. Use the Group context to show the availability of individual servers or groups. Check the **Show Instances** box on the Group context to see the individual Nortel CS server instances being managed from the proxy computers. The servers or groups are shown as rows in the report. Columns in the report display the available and unavailable percentages so that information can easily be graphed as a stacked column.

- *Nortel CS Listening MOS Good-Acceptable-Poor.* Use this report to create a pie chart of good, acceptable, and poor values of listening MOS. By default, this report uses the Nortel Terminal Average Listening MOS data that is collected by the AppManager NortelCS\_SS\_CallQuality Knowledge Script. Good listening MOS is greater than 4.03; poor listening MOS is less than 3.6. To change this report to show listening R-factor instead, use the Metric context to select **Nortel Terminal Average Listening R-factor** and change the **Good** and **Poor** standards defined in the **Parameters** section on the **Properties** tab. If you're using listening R-factor, we recommend setting the good standard to scores above 80 and the poor standard to scores below 70.
- *Nortel CS Jitter Good-Acceptable-Poor.* Use this report to create a pie chart of good, acceptable, and poor values of jitter. This report uses the Nortel Terminal Average Jitter data that is collected by the AppManager NortelCS\_SS\_CallQuality Knowledge Script. Good jitter values are those below 40 ms.; poor jitter values are those above 60 ms.
- *Nortel CS Latency Good-Acceptable-Poor.* Use this report to create a pie chart of good, acceptable, and poor values of latency. This report uses the Nortel Terminal Average Latency data that is collected by the AppManager NortelCS\_SS\_CallQuality Knowledge Script. Good latency values are those below 150 ms.; poor latency values are those above 400 ms.
- *Nortel CS Lost Packets Good-Acceptable-Poor.* Use this report to create a pie chart of good, acceptable, and poor percentages of lost packets. This report uses the Nortel Terminal Average Lost Packets data that is collected by the AppManager NortelCS\_SS\_CallQuality Knowledge Script. The good standard is packet loss below 0.50 percent; the poor standard is packet loss above 1.00 percent.

- *Nortel CS Service Levels Overview*. This dashboard report provides an overview of underlying reports showing key service level metrics: server availability and good-acceptable-poor levels of listening MOS, jitter, latency, and lost packets. Click on the title of any member report to see the full view of that report. When deploying this report, be sure to deploy each member report first.

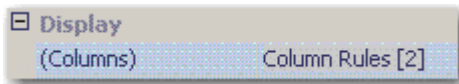
## Operational

The operational side of your organization may not be the flashiest aspect, but it's probably one of the most vital in terms of VoIP functionality. Operational reports provide the details behind the Service level management reports. Creating reports helps you isolate the servers that are experiencing problems.

Analysis Center offers several original Operational reports that allow you to quickly create what you need.

- *Nortel CS Call Volume*. Use this report to look at the total call volume made through Signaling Servers between IP phones for the time period that you specify. This report uses the **Nortel Terminal Audio Setups** and **Nortel Terminal Total Voice Time** metrics and the AppManager data collected by the NortelCS\_SS\_CallQuality Knowledge Script. Set the **Parameters > Time Units** property to select the units in which to show the total time duration. The report shows a table giving the total number of calls, total duration of all calls, and average duration per call.

**Tip:** To display one of the columns (such as Total Number of Calls) graphically, you can use Column Rules on the **Properties** tab to hide the columns that you don't want to display. Refer to the Analysis Center *User Guide* for details on using Column Rules.



In addition, change the **ViewMode** from Table to **Chart** or **Both**.



- *Nortel CS Good-Acceptable-Poor Quality by Server*. Use this report to examine the quality levels of individual Nortel CS servers. You'll use the Metrics context to select the quality metric that you want to include in the report. The list of metrics contains quality metrics collected by AppManager using the NortelCS\_SS\_CallQuality and NortelCS\_VGMC\_CallQuality Knowledge Scripts. Use the Group context to select the individual servers or groups that you want to include in the report. Check the **Show Instances** checkbox to see the individual Nortel CS servers being managed by the proxy computer. Use the **Properties** tab to set thresholds for good and poor performance. We recommend using the following standards.
  - For listening MOS, good is greater than 4.03; poor is less than 3.60.
  - For listening R-factor, good is greater than 80; poor is less than 70.
  - For jitter, good is less than 40 ms.; poor is greater than 60 ms.
  - For latency, good is less than 150 ms.; poor is greater than 400 ms.
  - For lost packets, good is less than 0.50 percent; poor is greater than 1.0 percent.

**Important:** The default thresholds on the **Properties** tab are set for jitter. These values do not automatically change when you select a different metric. If you select a different metric, such as latency or MOS, you must change the threshold values on the **Properties** tab.

- *Nortel CS Performance Data*. Use this report to examine Nortel CS performance data by computer or computer group. Use the Group context to select the computer groups or individual computers that you want to include in the report; the computers or computer groups will be shown as rows in the report. Use the Metric context to select the metrics to include in the report; the metrics will be shown as columns in the report. Use the other context controls as data filters. For example, use the Time context to control the time range of the data. Use the Measures context to indicate whether you want to show the average, sum, or maximum for the measure. For metrics such as Jitter or Latency, average or maximum may be appropriate. For metrics that show volume, such as calls attempted or calls completed, selecting sum may be appropriate.
- *Nortel CS Performance Data by Date and Time*. Use this report to examine Nortel CS performance data by date and time. The date and time are shown as rows in the report. By default, the report shows the data by day. You can show data by hour or minute by using the Time context and changing the **Interval** to hour or minute. Use the Group context to select the computer groups or individual computers that you want to include in the report; the computers or computer groups are shown as columns in the report. If you are including several computers or computer groups, you may want to change the **Chart Type** on the **Properties** tab from **Column** to **Line** to more easily represent many entities in the graph. Use the other context controls as data filters, including using the Metric context to select which metric should be shown in the report. For example, to create a report showing yesterday's average listening for each hour, use the Metric context to select **Nortel Terminal Average Listening MOS** and use the Time context to indicate **Yesterday** in the date range and **Hour** in the interval. Remember to save your customizations before moving to a different report.
- *Nortel CS Performance Data by Hour*. Use this report to examine Nortel CS performance data by the hour of day. The hours of the day are shown as rows in the report. Use the Group context to select the computer groups or individual computers that you want to include in the report; the computers or computer groups are shown as columns in the report. If you are including several computers or computer groups, you may want to change the **Chart Type** on the **Properties** tab from **Column** to **Line** to more easily represent many entities in the graph. Use the other context controls as data filters, including using the Metric context to select which metric should be shown in the report. For example, to create a *Busy Hour* report for IP phone call volume, use the Metric context to select **Nortel Terminal Total Audio Setups** and use the Measures context to select **Sum**. Remember to save your customizations as a new report before moving to a different report.
- *Nortel CS Performance Data Metrics by Date and Time*. Use this report to easily compare multiple metrics by date and time — useful information to have when you're troubleshooting. For example, you can compare the **Nortel Terminal Average Listening MOS** data to that of **Nortel Terminal Minimum Listening MOS**. Or, you can compare the number of **Nortel Terminal Total Registration Attempts** to the number of **Nortel Terminal Total Registration Failures**. Use the Metric context to select one or more metrics to include in the report. Use the Time context to set the time range and interval (for example, Last 28 Days by Day). The interval you select determines the time aggregation (for example, if you select Day, there is one value for each date; if you select Hour, there are 24 values for each date). Use the other context controls as data filters. For example, use the Group context to select which computers or groups to include in the report.

## Capacity Planning

Capacity Planning reports should answer questions such as “How busy is this device” or “Is this device being used at all?”

You can customize the *Nortel CS Volume Trend and Prediction* Capacity Planning report to show the trend of call volume for IP phones. This report uses the total number of calls each day over the specified range of existing data. You’ll use the Metric context controls to select the types of calls to include in the trend report. Use the Group context controls to indicate whether you want to see trending data for all of your Signaling Servers or for an individual Signaling Server.

Once you select the report in the Navigation pane, select the **Nortel Terminal Total Audio Setups** metric. We recommended that you set the **Parameters > PredictionDays** property to less than 180. The larger this value, the longer it takes to calculate the individual prediction values. If you set the property to a value greater than 730, the report will fail. Remember to save your customizations as a new report before moving to a different report.

**Note:** You also can use this report to identify trends in trunk phone calls using the SIP and H.323 metrics.

---

## Conclusion: Report planning and execution

Now that you’re a bit more familiar with the reports that are available, keep in mind the following suggestions before you begin executing and deploying reports. Think about why you want to create a report and who’ll be using it before you do anything else.

1. Decide what purpose the report will have. What information do you want the report to show?
2. Look through the original reports. Does one exist that’s similar to what you want? Consider not only the reports within the NortelCS folder, but also the other Analysis Center original reports.
3. Look at the Configuration Card to see the report properties. Is this report still a good match?
4. If so, execute the report to see whether it actually does what you want.
5. If the report does what you want, save it under a new, content-specific title in an appropriate folder.
6. If necessary, deploy the report to SQL Server 2000 Report Services for access by other users.
7. If none of the original reports are suitable, look through the Templates folder to find a report that’s structured the way you want. Save it under a new title in an appropriate folder, customize the report to present the data that you need, and then execute the report to check its function. Finally, deploy the report.


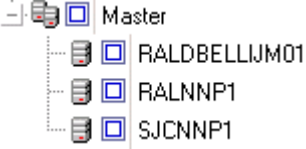

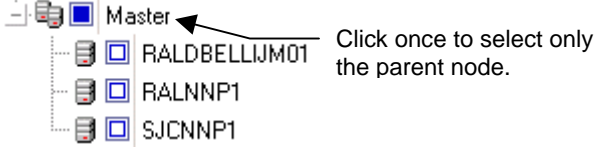

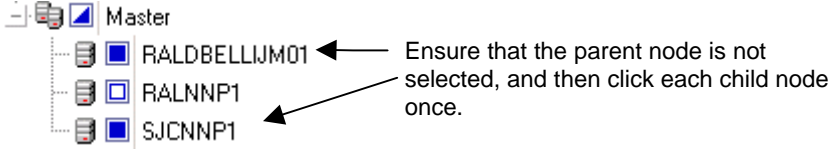
# Appendix A: Context tab functions


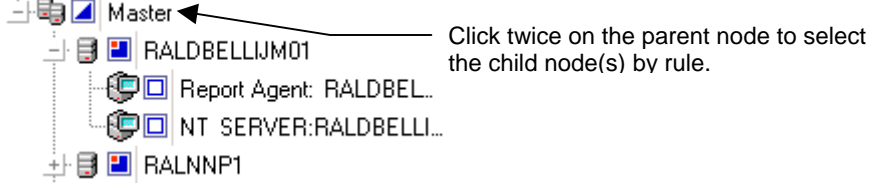

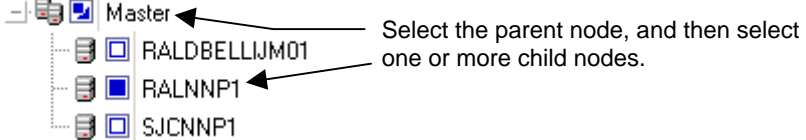
This appendix provides a brief summary of each icon on the **Context** tab of the Tasks pane, and a short description of how to select objects (nodes) on the **Context** tab. The **Context** tab appears only when you have selected a report in the Navigation pane.

The context of a report refers to the computers, data streams, and time frame that are the subject of the report, and may also include measures of the data, such as average or maximum.

The multi-state tree control of the **Context** tab allows you to make a variety of different selections in order to create different orientations of the data. The same tree control is used for the Group, Data Source, Knowledge Script, and Metric contexts. Variations on the control icon, a blue and white square, represent the five different states of selection that can apply to a node in the tree.

The following table defines and provides instructions for using the five variations of the tree control icon.

Icon	Description
	<p>The parent node is not selected, and none of its children is selected. With this selection option, none of these objects will be included in your report.</p> 
	<p>The parent node is explicitly selected; none of its children (if it has any) is selected. With this selection option, your report will display data only for the parent object.</p> 
	<p>The parent node is not selected, but one or more of its children is selected. With this selection option, your report will display data only for the child object(s) that you have selected.</p> 

Icon	Description
	<p>The child node is selected by rule; none of its children is selected. To select a node by rule means to select the child node by double-clicking on the parent node. When you select a child node in this manner, you cannot change the child's selection or that of its children by clicking directly on their nodes. You must click again on the parent node to change the child's selection.</p> <p>With this selection option, your report will display data only for the child objects that are selected by rule.</p>  <p>Click twice on the parent node to select the child node(s) by rule.</p> <p><b>Note</b> This selection option applies only to the Group context.</p>
	<p>The parent node is explicitly selected, and one or more of its children is selected (by any method). With this selection option, your report will display data for the parent object AND any of the child objects that you have selected.</p>  <p>Select the parent node, and then select one or more child nodes.</p>