Reporting Guide

NetIQ® Reporting Center

November 2010

1009 Windows Server 2008 Enhanced DSS and Diffie-Hellman Cryptographic Provider (DSSENH)

1010 Windows Server 2008 Enhanced Cryptographic Provider

1012 Windows Server 2003 Enhanced Cryptographic Provider (RSAENH)

This product may also claim FIPS compliance by use of one or more of the Open SSL cryptographic components listed below. These components were certified by the Open Source Software Institute and obtained the FIPS certificates as indicated.

918 - OpenSSL FIPS Object Module v1.1.2 - 02/29/2008 140-2 L1

1051 - OpenSSL FIPS Object Module v 1.2 - 11/17/2008 140-2 L1

1111 - OpenSSL FIPS Runtime Module v 1.2 - 4/03/2009 140-2 L1

Note: Windows FIPS algorithms used in this product may have only been tested when the FIPSmode bit was set. While the modules have valid certificates at the time of this product release, it is the user's responsibility to validate the current module status.

Contents

Chapter 4
Working with Reporting Center Reports **15**

Appendix A
Troubleshooting **25**

About This Book and the Library

The *Reporting Guide* provides conceptual information about the NetIQ Reporting Center (Reporting Center) product. This book defines terminology and various related concepts.

Intended Audience

This book provides information for individuals responsible for understanding Reporting Center concepts.

Other Information in the Library

The library provides the following information resources:

Help

Provides context-sensitive information and step-by-step guidance for common tasks as well as definitions for the fields on each window.

Release Notes

Provides information about enhancements to Reporting Center since the last release, and lists any known issues for this release.

Conventions

The library uses consistent conventions to help you identify items throughout the documentation. The following table summarizes these conventions.

Convention	Use
Bold	• Window and menu items • Technical terms, when introduced
Italics	• Book and CD-ROM titles • Variable names and values • Emphasized words
`Fixed Font`	• File and folder names • Commands and code examples • Text you must type • Text (output) displayed in the command-line interface
Brackets, such as *[value]*	• Optional parameters of a command
Braces, such as *{value}*	• Required parameters of a command
Logical OR, such as *value1|value2*	• Exclusive parameters. Choose one parameter.

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Chapter 1
Understanding Reporting Center

NetIQ Reporting Center (Reporting Center) allows you to extract data from the databases of NetIQ products and present the information as charts or tables in reports. Reporting Center transforms the data into useful information about the computing infrastructure that supports your business. You can use these reports to track the performance of your servers, uncover trends across your network, make forecasts, and track security events. Reporting Center uses Microsoft SQL Server and SQL Server Reporting Services (SSRS) to deliver up-to-the-minute enterprise analysis reports.

Reporting Center Architecture

Reporting Center is made up of a number of software components that you can install on one computer or distribute across multiple computers. The Console, Web Service, and Reporting Services Data Extension work together with a Configuration Database to retrieve data and execute usable reports in Reporting Center. You can then deploy the reports to SSRS. You can view executed reports in the Reporting Center Console or in a browser.

The following diagram provides an overview of the Reporting Center architecture.
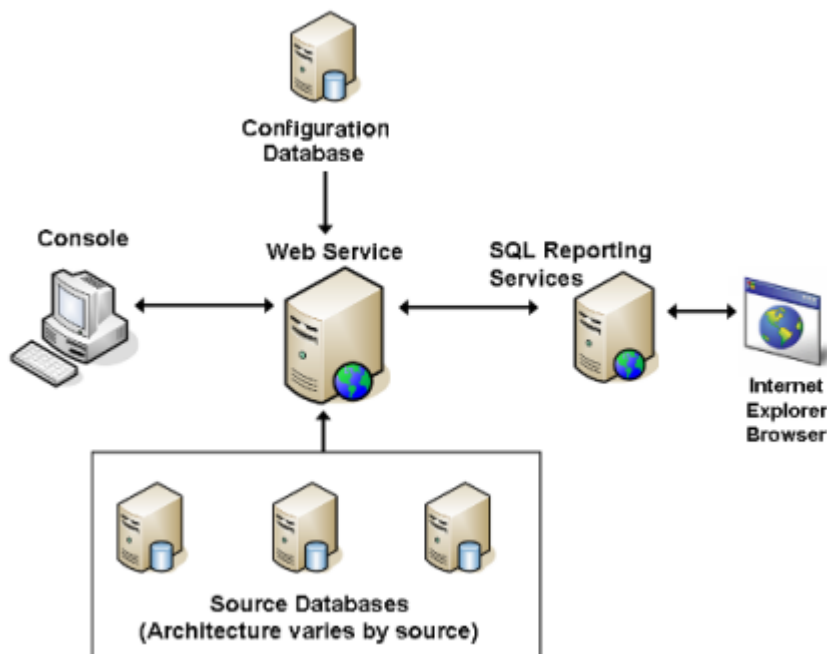
Console

The Console is the Reporting Center user interface, where you execute reports and do administrative tasks, such as defining Reporting Center accounts, groups, and permissions. From the Console you can manage connections to databases on any SQL Server. You can also configure contexts for each report, such as setting a time frame, selecting data streams, and specifying parent categories of data. You can customize the look and feel of a report by modifying its properties in Reporting Center, and then deploy it to SSRS.

Configuration Database

The Configuration Database contains information that Reporting Center uses to execute your reports, including settings you configure during installation, as well as information that you define and view in the Console. The Configuration Database includes the following information:

- Security information, such as the level of privileges assigned to each user, and the permissions you define for folders and reports.
- SQL server and database names that Reporting Center uses to execute reports.
- Information about folders you set up in the Console, which group your reports and database connections.
- Web Service specifications.
- Customized schedule configurations and the status of scheduled reports.

Web Service

The Web Service is the centralized point of access to all your databases. It serves as the layer between the Console and the source databases, running the SQL queries that gather report data and then returning the data to the Console. In addition to authenticating source database connections, it also authenticates connections to the Reporting Services Data Extension, which, in turn, publishes your reports to SSRS. The Web Service runs on a Microsoft Internet Information Services (IIS) Web server.

Reporting Services Data Extension

Reporting Center allows you to deploy reports to SSRS, which is the component of SQL Server that allows you to create, manage, and deliver reports on a schedule. When you deploy a report from Reporting Center, the Reporting Services Data Extension communicates with SSRS through the Web Service to deliver the information. SSRS publishes the report, which you view in a Web interface.

Chapter 2
Installing Reporting Center

This chapter lists the system requirements, account requirements, and supported applications for Reporting Center components. It also provides information about things to consider when you plan your installation or upgrade, and how to get started using Reporting Center.

System Requirements

The following table lists the hardware and software requirements for Reporting Center components.

	Requirement
Disk Space	575 MB free disk space
Memory	512 MB, 1 GB recommended
Screen Resolution	At least 1024x768 for the Console
Operating System	One of the following operating systems: • Microsoft Windows Server 2003 (32-bit or 64-bit) • Microsoft Windows Server 2003 R2 (32-bit or 64-bit) • Microsoft Windows Server 2008 (32-bit or 64-bit) • Microsoft Windows Server 2008 R2 (64-bit) The Console also supports the following desktop operating systems: • Microsoft Windows 7 • Microsoft Vista Enterprise • Microsoft Windows XP Professional
Configuration Database	Microsoft SQL Server 2005, 2008, or 2008 R2 (Express, Standard, or Enterprise Editions on 32-bit or 64-bit systems) Ensure that you install SQL Server and the Windows operating system on the same platform, either 32-bit or 64-bit.
Console	Microsoft .NET Framework 3.5 SP1
Web Service	• Microsoft Internet Information Services 6.0, 7.0, or 7.5 • Microsoft .NET Framework 2.0
Data Extension	• Microsoft SQL Server Reporting Services 2005, 2008, or 2008 R2 (Standard or Enterprise Edition, not Express Edition) • Microsoft .NET Framework 2.0

Planning Your Installation

This section includes the following information to help you plan your installation:

- Descriptions of the user accounts you will need to create or identify before installation.
- Installation prerequisites for each component of Reporting Center.
- Installation considerations for each component and the Windows Server 2008 and 2008 R2 operating systems.

Account Requirements

The following table lists the accounts you need to create or identify *before* installing Reporting Center.

Account	Description	Requirement
Database Installer Account	Account you log in with to run the Setup program that creates the Configuration Database.	• System Administrator privileges on the SQL server where you install the Configuration Database. • Local administrative permissions on the computer where you run the Setup program.
Web Service Installer Account	Account you log in with to run the Setup program that creates the Web Service and also configures the Web Service account in the Configuration Database.	• System Administrator privileges on the SQL server where you install the Web Service. • Local administrative permissions on the computer where you run the Setup program.
Web Service User Account	Account that the Web Service uses to retrieve data from the reporting database.	• db_owner role on the Configuration Database. • db_datareader role in each reporting database.
Console Account	Account that connects to the Web Service to display and use the Console.	• Ability to log into the Web Service.

Installation Prerequisites

The following table lists the prerequisites you need to install each component of Reporting Center. For more information about specific accounts, see the Account Requirements table.

Component	Installation Prerequisites
Configuration Database	• Credentials for the Database Installer Account. • The name of the SQL Server instance where you will install the Configuration Database, in this format: *ServerName\Instance*
Web Service	• Credentials for the Web Service Installer Account. • The location of the Configuration Database, in this format: *ServerName\Instance* • Credentials for the Web Service User Account.

Component	Installation Prerequisites
Console	• The location of the Configuration Database, in this format: *ServerName\Instance*
	• The name of the Web Service server, in this format: http://*ServerName*/ACWebService
Reporting Services Data Extension	• The location of SQL Server Reporting Services (SSRS), in this format: *ServerName\Instance*

The Order of Your Installation

You can install the Reporting Center components individually or in any combination. If you install the components on separate computers, install the components in the following order:

1. Configuration Database

2. Web Service

3. Reporting Services Data Extension

4. Console

Configuration Database Considerations

Before you install the Configuration Database, consider the following information:

• After installing Reporting Center, if you run the Setup program to modify your installation, there is no option to install the Configuration Database. This is a safeguard that prevents you from having multiple Configuration Databases installed in a single Reporting Center environment.

• After installing Reporting Center, set up regular SQL server backups for the Configuration Database.

• When you uninstall Reporting Center, the setup program removes all components except the Configuration Database.

Web Service Considerations

If you install the Web Service on a non-default Web site, do not customize the corresponding Host Header value. For information about removing the Host Header, see the Troubleshooting chapter.

Reporting Services Data Extension Considerations

Before you install the Reporting Services Data Extension, consider the following information:

• You usually install the Reporting Services Data Extension on the computer hosting SSRS, your report server. However, if you are planning on using the Report Designer component of SSRS to customize reports, install the Reporting Services Data Extension on the computer hosting Report Designer.

• If you configured SSRS with SSL, during installation you can specify the URL for the SSL-configured report server. You can also change the default SSRS URL after installation in the Console. Go to **Tools > Options > Enterprise Options > Reporting Services > Default Report Server Location**, and enter the URL for the SSL-configured report server.

Console Considerations

Because the Web Service is the communication layer between the Console and the database, install the Web Service before installing the Console.

Installing Reporting Center on Windows Server 2008 and R2

Install IIS on Windows Server 2008 (IIS 7.0) or Windows Server 2008 R2 (IIS 7.5) with the following Role Services selected:

- Application Development: ASP.NET
- Security: Windows Authentication

Getting Started with Reporting Center

Once you have installed the Reporting Center components, you can open the Console and begin managing database connections, setting security permissions, and executing reports. This section describes how to start Reporting Center and begin working with database connections.

Starting Reporting Center

When you log on to the Console, the Web Service uses IIS to validate the account credentials according to the way you configured the Web Service during installation.

To start Reporting Center:

1. Log on to the computer where you installed the Reporting Center Console.

2. Click **Start > Programs > NetIQ > Reporting Center > Reporting Center Console**.

3. Provide the required information in the Logon dialog box and click **Logon**.

Navigating Reporting Center

Reporting Center is made up of three easily navigable areas from which you can perform all the tasks relating to database connections, security settings, and reports.

Navigation Pane   Results Pane   Tasks Pane
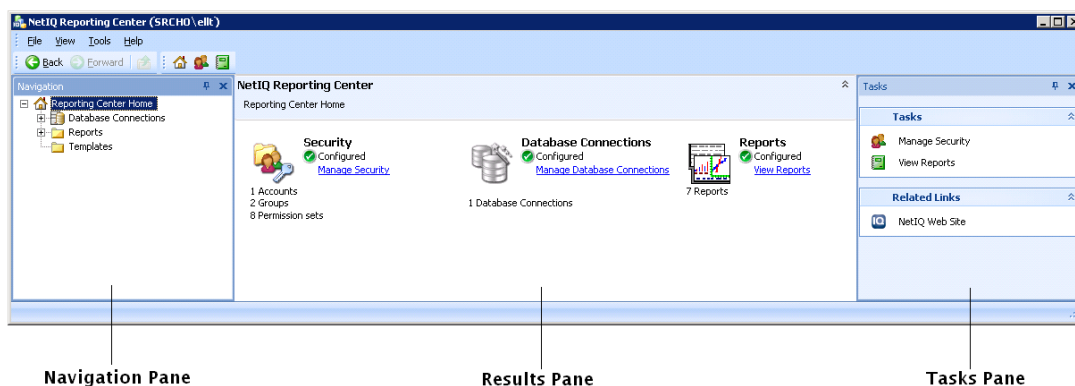
Navigation Pane

The Navigation pane is the starting point for Reporting Center. Use the Navigation pane to initiate tasks such as choosing a database connection and selecting a report. The information in the other panes change according what you do in the Navigation pane.

The Navigation pane contains **Reporting Center Home**, which allows you to start managing security, database connections, and reports. When you click **Reporting Center Home** from the Navigation Pane or the toolbar, Reporting Center displays links to start each of those tasks, along with information about your current security settings, database connections, and reports.

Results Pane

The center of the Reporting Center interface contains the Results pane, which displays any information related to the folder, report, or database connection you select in the Navigation pane. This includes, for example, the contents of a report or the details of a database connection. When you modify report properties Reporting Center and then execute a report, the Results pane displays the report with those changes.

Tasks Pane

The contents of the Tasks pane change depending on what you select in the Navigation pane. When you select an individual report, for example, the Tasks pane displays three tabs: Context. Tasks, and Properties. They contain the context controls for the report, a list of report-related tasks, and the property controls for the report.

Managing Database Connections

Database connections are the basis for the reports that you execute with Reporting Center. The Setup program automatically configures your initial database connections according to the information you provide during installation. These database connections point to specific database servers that provide the data for your reports. Database connections use either Windows authentication or SQL authentication, depending on the security configuration of the source SQL Server and the choices you make when installing SQL Server. After installation, you can configure additional database connections and modify connection properties in the Console. When you add or modify a connection, you need to restart the Reporting Center Application Pool.

Restarting the Application Pool

If you make any changes to database connections, such as modifying the authentication method, or adding or deleting connections, restart the Reporting Center Application Pool in Microsoft IIS Manager.

To restart the Application Pool:

1. In IIS Manager, expand the Console server, and expand **Application Pools**.

2. Right-click **NRCAppPool** and select **Stop**.

3. Right-click **NRCAppPool** and select **Start**.

Chapter 3
Configuring Reporting Center Security

Once you have installed Reporting Center and become familiar with the interface and database connections, the next step is to implement security. Reporting Center security defines what is visible to each user, and determines what each user is allowed to do in Reporting Center.

Understanding Reporting Center Security

Configuring security in Reporting Center means restricting or allowing users access to report folders and database connections. To configure security, define accounts, groups, and permissions.

Accounts

Individual users. Administrators create an account for every user.

Groups

Collections of accounts. Every account must be a member of at least one group.

Permissions

Definitions specifying the level of access to database connections, folders, and reports that groups can have.

Planning and configuring security includes the following types of tasks:

- Enabling or disabling accounts, granting Reporting Center Administrative permissions to individual accounts, and adding Windows accounts to Reporting Center.

- Creating groups of Reporting Center accounts, granting administrative permissions to specific groups, and adding Windows accounts to Reporting Center groups.

- Creating permissions that are more restrictive than administrative permissions, and then enabling or disabling those permissions.

- Organizing your security model before you implement it by creating accounts, groups, and permissions, and keeping them disabled until you are ready to apply security. You can also enable or disable specific accounts, groups, or permissions during the ongoing administration of Reporting Center security.

Working with Accounts and Groups

Because you configure Reporting Center security by assigning a group and a permission to each object in the Navigation pane, the primary purpose of creating an account is to assign it to a group. You can grant accounts administrative privileges, but you cannot associate permissions with accounts by themselves.

You can create accounts, groups, and permissions in any order. Once you have created accounts, groups, and permissions, you can add accounts to groups, and assign a group and a permission to a folder, report, or database connection.

For example, you might want to allow broad access to various report folders, but restrict access to database connections so that only an administrative group with permissions to create database connections can work with them.

Using Windows Accounts and Groups in Reporting Center

In addition to allowing you to create new accounts, Reporting Center uses existing Windows accounts and adds them to Reporting Center accounts and groups. Each time a user logs on to the Web Service to access the Console, Reporting Center checks both the local Windows groups on the Web Service computer and the groups defined in Reporting Center. When the group names match, Reporting Center adds the Windows account to the corresponding Reporting Center group.

Reporting Center has three pre-defined groups:

`BUILTIN\Administrators`

> Grants members of the Windows Administrator group full, administrative permissions in Reporting Center.

`BUILTIN\Users`

> Grants members of the Windows Users group limited, non-administrative permissions in Reporting Center.

`Reporting Center Everyone`

> Includes all Reporting Center accounts automatically, and allows administrators to grant permissions globally to anyone who logs on to the Console.

For example, if the connecting user is a member of the Windows group *Administrators*, then that user is added as a Reporting Center user with administrative permissions, and is added to the pre-defined Reporting Center group `BUILTIN\Administrators`. If the connecting user is a member of the Windows group *Users*, then that user is added as a non-administrative Reporting Center user, and is added to the pre-defined Reporting Center group `BUILTIN\Users`.

The account you use to install Reporting Center is added as an administrative account with full permissions. The automatic addition of Windows users to Reporting Center groups works for the two default groups. If you want to create additional local Windows groups and matching Reporting Center groups to take advantage of the automatic addition of users, use the following naming convention for the Reporting Center groups:
<Web Service computer name>\<Windows group name>

If you remove a member from a Windows group on the Web Service computer, you can no longer use that account in Reporting Center, but the account remains in Reporting Center until you remove it.

Working with Permissions

Reporting Center provides you with a number of ways to restrict or grant access to database connections, folders, and reports. You can assign administrative rights to an account or a group, which gives them full Reporting Center permissions to view and manipulate anything in the Navigation pane. Defining permissions allows you to enforce more granular security for each object in Reporting Center.

You can allow or restrict access to every task users can do, so that, for example, one group can have permission to create and delete reports, and another group can have permission to only view reports. You will decide what users can do according to what they need to effectively do their jobs, and according to how you want to configure your entire system.

When you configure permissions, Reporting Center represents the status of specific permissions in checkboxes. Permissions have three states.

Allowed: Users will have access to the object with this permission or will be allowed to do the specified task (such as modifying reports or creating folders).

Denied: Users will not be able to access the object with this permission or will not be allowed to do the specified task. When a user logs on, Reporting Center does not display the restricted objects.

Undefined: The specified task does not have any defined permissions. Users will be able to view these objects but not complete the tasks.

Reporting Center has a number of predefined permissions that you can either customize to create new permissions, or use as provided. These permissions allow various levels of access to folders, nodes and reports in the Navigation tree. The following table lists the predefined permissions, along with the access they allow or restrict. If you customize one of these permissions, you can allow or restrict access to each individual task, such as creating folders, exporting reports, and so on.

Category	Permission
Administration	**Full Permissions** allows administrators to assign security rules to the folder or database connection.
Folder	One of the following permissions: • **Full Permissions** allows you to create, delete, move or rename the folder. • **No Permissions** allows you to only view the folder.
Node	**No Visibility** restricts viewing access to the node (database connection, folder, or report).
Report	One of the following permissions: • **Execute Only** restricts access to everything except executing the report. • **Execute** allows groups to execute the report only, but does not restrict access to the other tasks. Their states are undefined. • **Full Permissions** allows groups access to the full range of report tasks: delete, deploy, execute, export, move, print, rename, save, and save as. • **Modify and Use** allows groups to execute, export, print, and save the report.

Configuring Security Settings

Use the Manage Security dialog box to create, modify, or delete user accounts, groups, and permissions. You can easily modify your security model so that users can view and execute only the reports and database connections relevant to them. Reporting Center saves all security settings in the Configuration Database.

To configure security settings:

1. Click **File** > **Manage Security** or click **Manage Security** on the toolbar.

2. Click either **Accounts**, **Groups**, or **Permissions**.

3. *If you are creating a new account or group*, click **Add**.

4. *If you are creating a new permission*, do one of the following tasks:
   - Click **Add**.
   - Select a predefined permission and click **Add**.

5. *If you are modifying, copying, or removing a setting*, select the specific account, group, or permission and click **Add**, **Modify**, **Copy**, or **Remove**, according to what you want to do.

For information about specific fields, click Help in the dialog box.

Assigning Security

Once you have set up accounts, groups, and permissions, the next step is to apply security to the objects in the Navigation pane. When you configure security for these objects, you choose a group and a permission set and associate them with the specified object. These security settings determine what users are allowed to do in Reporting Center. You can apply security to every object except **Reporting Center Home**, which is the root object in the Navigation pane.

For objects in a hierarchy, Reporting Center uses the most restrictive permissions and applies them to the subfolders and objects. If you have not configured security for a particular object, that object inherits the permissions of its immediate parent. When you log on to Reporting Center, it displays only the objects that you have permission to view.

For example, suppose a group has permission to view the default **Reports** folder, as well the folder for Application A, but does not have permission to view the folder for Application B. In this case, the group has access to the reports for Application A, but does not have access to the reports for Application B. The Console will not display the Application B folder when users from that group log on.

Applying Security to an Object

You can add multiple accounts to a group. You can also add the same group multiple times with different permissions. In this case, if there are overlapping permissions (for example, two different sets that both set permissions for reports), the most restrictive permission set takes precedence.

Note that permissions for databases are embedded in the Administration permission set.

To apply security to a folder, database, or report:

1. Right-click the object in the Navigation pane and click **Security**.

2. Click **Add**.

3. In the dialog box, choose a group and then choose a permission set. Reporting Center enforces this permission set for the group you select.

4. Click **Add** and then click **OK**.

Chapter 4

Working with Reporting Center Reports

This chapter describes Reporting Center reports and provides information about configuring reports to display data in a particular way. For example, you can choose a date range for each report, the way a chart looks in the report, and the number of rows Reporting Center retrieves from the database for a particular report. It also describes how to execute reports in Reporting Center, and how to deploy reports to SQL Server Reporting Services (SSRS).

Understanding Reports

Reports contain information that Reporting Center retrieves from databases specified in the reports and displays the information in the following ways:

- In a chart, a graphical representation of the data.
- In a table, containing rows and columns of data.
- In both a chart and table.

When you select a report, Reporting Center displays the contents of the report in the Results pane, and the contexts and properties of the report in the Tasks pane.

Contexts

> The data controls defined in the report, such as the database connection, data streams, and time frame. The information in the Context tab changes according to the definitions of the report. If the report has no defined contexts, the Context tab is blank, and Reporting Center displays a link to the Configuration Card, which contains the settings for that report. You can modify most contexts to customize your report. You can also filter nodes on the context tree to display specific data, and you can perform a search on the context tree. Note that these functions are exclusive: entering text in the Search box disables the Show Selected Only check box, which allows you to select specific objects from the context tree.

Properties

> Specific elements in a report that either describe the report (ID, Description, and ModifyDate, for example), govern behavior (RowRetrieval property), or specify the format (Chart and Display properties). You can modify most properties to customize your report.

You can view the current context and properties settings for a report in the Configuration Card. The Configuration Card contains information such as the title of the report, the Database Connection type, specific contexts, and the display settings. The contents of the Configuration Card vary according to the type of report. You can access the Configuration Card from the Report menu or by right-clicking the report.

Once you have set the contexts and modified properties of a report, you can execute the report and work with it in Reporting Center, or deploy it to SSRS. When you modify contexts and properties and execute a report, by default Reporting Center caches the data until you execute the report again. When you select the report, Reporting Center displays the cached data. To see the more recent data, execute the report again. Alternatively, you can configure Reporting Center to cache no data so that executing the report displays the most recent data set. You configure the Cached Reports settings on the User Options page of the Tools menu.

Whenever you deploy a report to SSRS, you have a number of deployment options, such as executing the report on a schedule, and choosing the delivery method of the deployed report. You can configure these settings either in the in the Deploy Report window in the Console, or in SSRS.

Setting the Context for a Report

The contexts that Reporting Center displays are determined by the contexts defined in the report. Each report can have any number of contexts. This section describes common context controls and explains how to display and lock a report context.

Common Context Controls

The following are two common context controls.

Database Connection

> Lists the sources of data for your report. You can select a database connection from the list if there is more than one connection available for the report.

Time

> Allows you to specify the date and time range for a report. You can customize the dates and times or choose from predefined ranges. You can also define the interval at which you aggregate data in your report. For example, if you have specified a time range of 12 months, you will want to aggregate data by month rather than day. You can limit the contents of a report to specific hours of the day, and specific days of the week.

Displaying and Locking Report Contexts

In Reporting Center, you access context information from the Context tab in the Tasks pane. When you first open Reporting Center, it displays the Tasks pane to the right of the Results pane. When you select a report in the Navigation pane, Reporting Center displays the contexts of the report in the Context tab. From there, you can view and modify them, and determine which contexts to display. You can remove context buttons in Reporting Center to make a long context list more manageable. Reporting Center does not remove them from the report.

You can lock a context if you want to override the default context in reports that contain the same contexts. For example, you can lock the Date Range context to "Last Month" if you want to execute a number of different reports but only display data from the past month for each report. You can also execute a report covering the same servers and metrics, but for a number of different time periods.

To lock or unlock a context, click the locking control at the top of the Context tab. When reports do not include the same context, Reporting Center automatically unlocks the context for those reports, but keeps it locked when you switch to a report that does contain the context.

To display and manage the context controls of a report:

1. In the Tasks pane, click the Context tab.

2. Click the name of the context at the bottom of the Context pane. You can view one control at a time.

3. *If you want to include or exclude specific context buttons from the list*, click the arrow at the bottom of the Contexts pane and click **Add or Remove Buttons.**

4. *If you want to display or hide contexts buttons, one at a time*, click the arrow at the bottom of the Contexts pane and click **Show More Buttons** or **Show Fewer Buttons.**

5. *If you want to lock or unlock a context*, click the lock icon at the top of the Context pane.

Setting Report Properties

When you select a report in the Navigation pane, Reporting Center displays the properties of the report in the Report Properties tab, which you access from the Tasks pane. The Report Properties tab displays the default properties associated with that report, including descriptive information about the report, chart settings, display settings, threshold settings, and row retrieval settings. You can configure most report properties.

Each time you modify a property in a report, save the report to display the change in the Results pane and to save the new setting in the Configuration Card. When you are ready to execute or deploy the report, save the report again to ensure that the Console or your browser display the changes correctly.

Displaying Changes to Charts

When you make changes to the chart properties, Reporting Center allows you to apply those changes without executing the report each time you make a change. To apply changes to the chart of a report, right-click anywhere in the Properties pane and click **Refresh Chart**.

Setting Properties to Enhance Charts

Reporting Center makes it easy to configure the chart properties to create reports that are easy to understand. Suppose you are preparing a report that contains data over a period of 20 months. In this report, the maximum value for the Y-axis is set to 35. You can use properties to manipulate the way the chart represents the data. For example, if you use the default True setting for the Y-axis AutoScale property (in the Properties pane, go to **AxisY > AutoScale**), your chart will look like this:
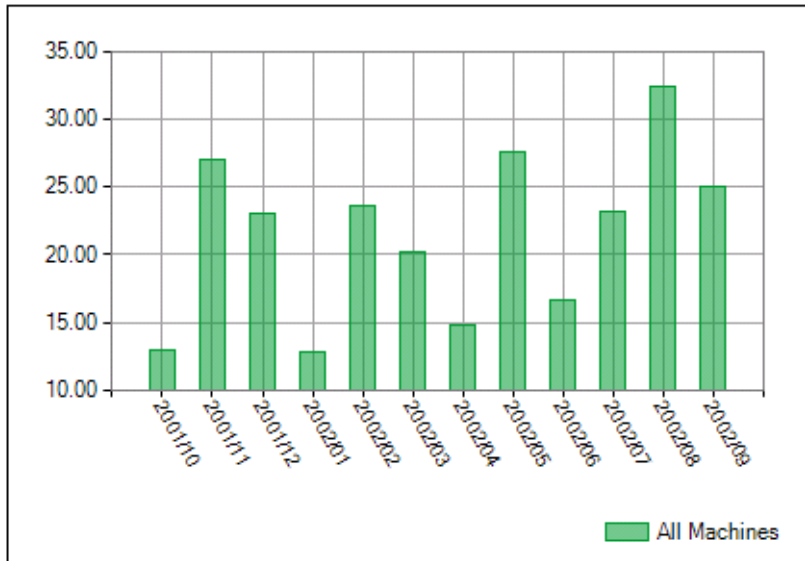
Reporting Center calculates the maximum value for the Y-axis based on the maximum value in the report. Although this chart provides an accurate representation of the values, you can use the AxisY properties to provide a more meaningful context in which to present this information. You can set the Y-axis to match the possible range of values by making the following changes to the AxisY properties:

- AxisY > AutoScale = False
- AxisY > Minimum = 0
- AxisY > Maximum = 100

After you modify these values and save the report, the chart will now look like this:
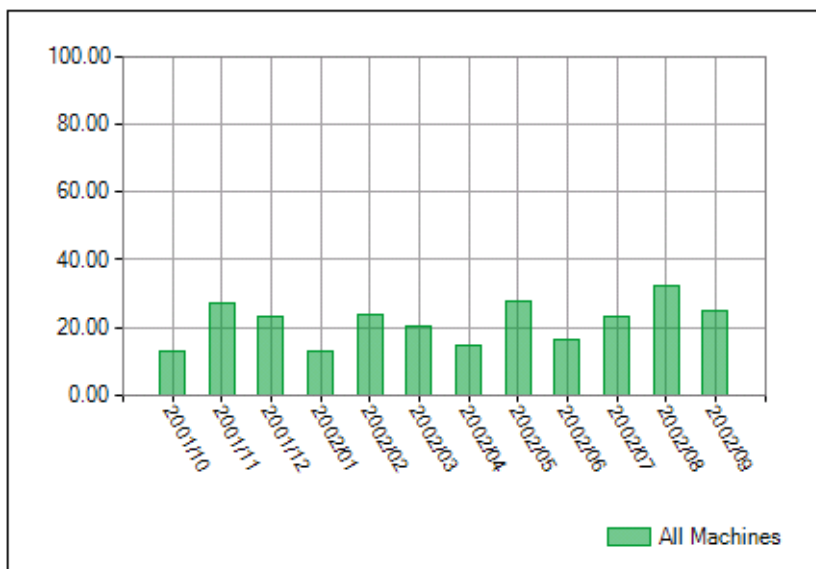
To make the chart even more readable, you can limit the number of labels on the X-axis. For this report, for example, it is unnecessary to display a date on each data point for 20 months. You can change the frequency of the X-axis labels by using the LabelInterval property (in the Properties pane, go to **AxisX > LabelInterval**).

If you change the X-axis LabelInterval value from 1 to 3, your chart will look like this:
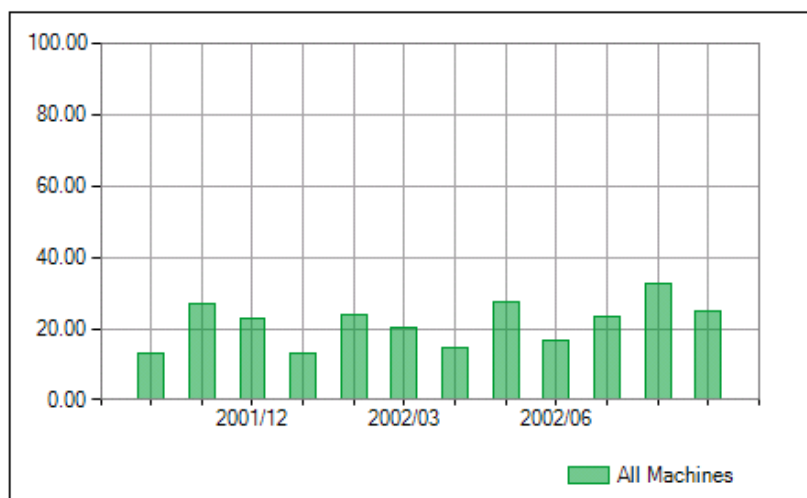
These are just a few of the ways that you can use properties to clarify the information in your charts and make them easier to understand. Before you deploy your reports, experiment with the chart properties to be sure you are presenting information in the best way for your intended audience. Once you have the properties set the way you want, save the report.

Working with Missing Data Points

Some reports containing trending data display a gap between two points, indicating missing data values. Depending on the reason for the missing values, you might want to fill in the gap completely or display a dotted line across the gap. For example, if you are monitoring server uptime, and a specific server was offline for a period of time, you would want to preserve the gap or display a dotted line across it to indicate that there was an interruption to the server uptime. On the other hand, if a specific server was offline due to routine maintenance, you could fill in the gap with a solid line to avoid highlighting it.

The two ChartEmptyPoints properties, Appearance and Style, control the way the chart displays the missing data points. The Appearance property allows you to specify the way Reporting Center fills the gap: by either calculating the average values of all data points, or by using zero as the value for missing data points. The Style property allows you to specify the line style that Reporting Center uses to fill in the gap: as a solid, dashed, or dotted line. The Style property applies to Line charts only.

The ChartEmptyPoints properties apply to reports that you execute in the Console, not to those that you deploy to SSRS.

Exporting Charts and Tables

You can export charts and tables from a report. You save charts in a number of image formats, and save tables in text or XML format, as a spreadsheet, or as a Web page.

To export a chart or table:

1. *If you want to export a chart*, on the chart toolbar, click **Export Chart**.

2. *If you want to export a table*, right-click in the table and click **Export Table.**

3. Type a file name.

4. Select the format in which to save the chart or table

5. Click **Save**.

Understanding Chart Limitations in Reporting Center

For each report containing a chart, you can override the default chart type and assign a new chart type for every column. You do this using by clicking **Column** in the Properties tab and modifying the **LineType** field in the Column Rules dialog box. Most types work together in the same chart. However, combining certain types in one chart will result in unreadable data in the Console. If Reporting Center displays an error related to charts, you should restart the Console and execute the report again or choose different chart types.

SSRS does not support the LineType and LineColor properties, and will not display them when you deploy a report that uses them.

The following table lists chart types (called **LineType** in the Column Rules dialog box) that you should not use in the same chart.

Chart Type	Cannot Be Combined With
Area	Bar, Pie, and StackedBar.
Bar	Any other chart type, *except* Bar and StackedBar.
Bubble	Bar, Pie, and StackedBar.
Column	Bar, Pie, and StackedBar.
Line	Bar, Pie, and any type of Stacked.

Chart Type	Cannot Be Combined With
Pie	Cannot be combined with *any other* chart type. It can only be used to represent a single series of data.
Point	Bar, Pie, and StackedBar.
Spline	Bar, Pie, and StackedBar.
SplineArea	Bar, Pie, and StackedBar.
StackedArea	Bar, Pie, and StackedBar.
StackedBar	Any other chart type, *except* Bar and StackedBar.
StackedColumn	Bar, Pie, and StackedBar.
StepLine	Bar, Pie, and StackedBar.

Using Templates and Dashboard Reports

Report templates and dashboard templates are available in certain NetIQ products. You access templates and dashboard reports from the Navigation pane.

Templates

A report template is a pre-defined report that allows you to create a new report based on the default contexts. To use a template, you need to save it with a new name and then customize it, if necessary.

Dashboard Reports

Dashboard reports provide a way of grouping reports that contain related data in a single layout. When you open a dashboard report, Reporting Center displays a thumbnail version of each of its member reports. To display the full report, click the title of the member report. You can use any dashboard report to create a new one by saving it with a new name and adding or deleting reports. If you change and redeploy a report that is also in a dashboard, you need to redeploy the dashboard report as well.

Executing and Deploying Reports

You cannot deploy a report that does not execute properly, for example, due to an invalid context setting.

In order to deploy a report with the current properties, save the report before you deploy it. If you do not save the report with the current properties, it will be deployed with whatever properties were last saved.

After you have executed a report, you can then deploy the report to SSRS. From SSRS, you can schedule the report to execute periodically. You can configure SSRS to send the report by email to one or more users, or write the report to a file share. You can also view the report by using a Web browser with access to SSRS.

From the Console, if you delete reports that are already deployed, then Reporting Services may not display such reports correctly. To deploy reports to Reporting Services, you must have permission to deploy a report from the Console and have Administrator level permissions on the Reporting Services computer.

SSRS Considerations

Before you deploy reports to SSRS, consider the following information:

- Reporting Center allows you to configure SSRS from the Console, without opening SSRS. You can schedule the report to deploy at intervals, choose the delivery method for the report, and indicate who receives the report.

- Once you have deployed a report to SSRS, you manage that report from the SSRS interface. For more information about SSRS, see the Microsoft documentation, *Reporting Services Books Online*, which is part of the default installation of SSRS.

- Users who deploy reports to SSRS must have permission to deploy a report from Reporting Center and also have Administrator-level permissions on the computer running SSRS.

- When you execute a report, the Reporting Center Console does not display empty columns in the chart. When you deploy the report, SSRS includes those empty columns in the report so that they can be displayed when data is available for those columns.

- SSRS does not support all the chart properties that Reporting Center allows you to implement. When you deploy a report with any of those properties, Reporting Center displays a warning that SSRS does not support the specific property and gives you the option not to deploy the report. If you do continue to deploy the report, SSRS will either substitute a chart property or leave the property out of the SSRS report.

Executing a Report

Once you have configured your report and modified any contexts and properties, you can execute it and view the latest report. Before you execute a report, you should save it from the toolbar or menu. Then you can execute it using the Execute Report button in the toolbar or the link in the Tasks pane. Reporting Center displays the report in the Results pane. You can then deploy it to SSRS.

Deploying a Report to SSRS

After you have saved and executed a report, you can deploy it to SSRS. From the Console, you can configure SSRS to schedule the report to execute periodically, send the report by email to one or more users, or write the report to a file share. You can view the report by using a Web browser with access to SSRS.

In order to deploy reports to SSRS, you need permission to deploy a report from Reporting Center, and Administrator-level permissions on the computer running SSRS.

In the Reporting Center, if you delete reports that you have already deployed, then SSRS might not display them correctly.

To deploy a report to SSRS:

1. Select the report and then click **Deploy Report** on the toolbar.

2. Type information in the Deploy Report dialog. For more information about this dialog box, see the Help. You can also accept the default information about the Report Server location and credentials.

3. Click **Deploy Report**.

4. You can view the deployed report by going to the SSRS home page and typing the following URL:

   `http://<SRS Server Name>/Reports`

5. Click the report you deployed.

Working with Deployed Reports

For reports that allow you to specify a time range, you can modify the time range of the deployed report in SSRS without returning to the Console to redeploy the report. This ability to change the time range in SSRS provides a user who does not have the Console installed with the flexibility to view data from a time range other than the one specified at the time you deployed the report.

For example, if you deploy a report that displays data from the last seven days and deliver it to a manager who wants to see the last 30 days, the manager can change the start and end dates in the SSRS user interface to view data from the last month.

For these types of reports, you use the Deploy Report window in the Console to specify that users can modify the time range of the data SSRS displays.

To enable date range customization in SSRS:

1. From the tree in the Navigation pane in the Reporting Center Console, select a report that contains a Time context.

2. Click **Deploy Report** from the toolbar, and in the Deploy Report window, select the **Allow user to modify start and end date** check box.

3. Click **Deploy**, and open the report in SSRS to confirm that it contains Start Date and End Date controls.

When you modify the date range in SSRS and redeploy the report, the deployed report displays the new date range. When you navigate away from the report and then return to it, SSRS displays data in the date range that you set when you deployed it from the Console, not the range you specified in SSRS.

The ability to change the time range in SSRS is available only for standard reports that contain a Time context only. It is not available for dashboard reports.

Appendix A

Troubleshooting

This appendix includes suggestions for resolving issues you may encounter when using Reporting Center.

General Web Service and Logon Issues

If you encounter errors when you log on to the Console or when you try to connect to the Reporting Center Web Service for another reason, check that there has been no change to the SQL account credentials. If the Web Service is installed on IIS 7.0 or later, check that ASP.NET Impersonation authentication is disabled in the ACWebService Virtual Directory.

You can also configure IIS to display more detailed error messages in order to diagnose the problem.

The following sections describe how to perform these tasks.

Resetting the SQL Account

If the Reporting Center Web Service is installed using a SQL account, and the password on that account is subsequently changed, you will see the following message:

```
Login Error: Login failed for user <SQL User Account> using the SQL account.
```

To resolve this issue, uninstall the Web Service and reinstall it using the new SQL password. This will not affect your reports.

Verifying the Authentication Settings

For IIS 7.0 or later, in the ACWebService Virtual Directory, Windows Authentication is enabled and ASP.NET Impersonation Authentication is disabled by default. If the Virtual Directory is no longer configured this way, you will be unable to log on to the Web Service.

To configure authentication settings in IIS 7.0 or later:

1. Start IIS Manager on the computer where you installed the Web Service, and expand the Web Sites folder.

2. Expand the Web Site where you installed the Web Service, and click **ACWebService**.

3. In the IIS section of the center pane, double-click **Authentication**.

4. *If ASP.NET Impersonation is enabled*, select it and click **Actions > Disable**.

5. *If Windows Authentication is disabled*, select it and click **Actions > Enable**.

6. Close IIS Manager.

Configuring Error Messages

If IIS Manager is displaying generic error messages, you can configure Internet Explorer to display more technical error messages in order to obtain more information.

To configure error messages in Internet Explorer:

1. Click **Tools > Internet Options**.

2. Click the **Advanced** tab and clear the **Show Friendly HTTP Error Messages** check box in the **Browsing** list. You might need to scroll down to view it.

3. Go back to IIS Manager and generate the Default Web Site error or Web Service error again to obtain more detailed information.

4. Contact NetIQ Technical Support with this information.

Reporting Center Web Service Unavailable

If you log on to the Console and the Reporting Center Web Service is unavailable, you will see the following message:

```
Login Error: The request failed with HTTP status 503: Service Unavailable.
```

Verifying That the Application Pool is Running

If you encounter this error message when you log on, ensure that the Reporting Center NRCAppPool application pool is installed and running. If it is not, you should restart it in IIS Manager and log on to the Reporting Center Console again.

To manually start the NRCAppPool application:

1. Start IIS Manager on the server hosting the Reporting Center Web Service, and expand **Application Pools**.

2. Right-click **NRCAppPool** and select **Start**.

3. Close IIS Manager and log on to the Reporting Center Console.

Resetting an Expired Windows Account

You can also check whether the Windows account used to install the Web Service has expired. If it did expire, and Reporting Center displays the Service Unavailable error when you log on, reactivate the account and reset the password. Then reset the Reporting Center Application Pool (NRCAppPool) identity. The NRCAppPool Identity user is the Windows account that was used to install the Reporting Center Web Service.

To manually reset the NRCAppPool identity user password:

1. Start IIS Manager on the server hosting the Reporting Center Web Service, and expand **Application Pools**.

2. *If you are running IIS 6.0:*

   a. Right-click **NRCAppPool** and select **Properties**. Click the Identity tab.

   b. Click **Configurable**, enter the Identity user credentials, and click **OK**.

   c. Right-click **NRCAppPool** and select **Start**.

3. *If you are running IIS 7.0 or 7.5:*

   a. Select **NRCAppPool**.

   b. From the Action pane to the right of the Application Pools list, click **Advance Settings.**

   c. In the Process Model section, select **Identity** and click **Custom account.**

   d. Click **Set**, and enter the Identity user credentials in the Set Credentials window.

   e. Click **OK** to close the Set Credentials window, the Application Pool Identity window, and the Advanced Settings window.

   f. Right-click **NRCAppPool** and select **Start**.

No Data Found In a Report

If you execute a report and Reporting Center displays a "No Data" message, you can try one of the following solutions.

Verifying the Privileges

Check that the you are running Reporting Center with the correct privileges by copying the Web Service URL into a browser. The browser should display the NetIQ Reporting Center Web Service Diagnostics page without prompting you for any credentials.

If you are prompted for credentials, then IIS is not authenticating your account automatically, as it should. Ensure that the System Administrator set up the account on IIS with the correct privileges.

Verifying Previous Data in the Report

If your privileges and connections are configured correctly, then the report might not contain data for the contexts specified for the report. In this case, you should check whether Reporting Center can retrieve data for a broader range of contexts, such as a greater time or date range.

To verify if the data is outside the current context configuration:

1. In the Context Pane of the Console, change the relevant contexts to include a broader date range or more information (such as selecting all items in a navigation tree).

2. Click **Execute**.

   If the report contains data, Reporting Center displays the information according to the contexts you reconfigured. This indicates that Reporting Center had originally executed the report correctly, but had no data to retrieve for the specified contexts.

Web Site Host Header Value Error

If your Web site is configured with host header values, which allow you to map multiple Web sites to an IP address, ensure that the Web site is configured to accept requests based on host header names. For more information, see the following Microsoft Knowledge Base article:

`http://support.microsoft.com/kb/308163`