

User Guide

NetIQ Analysis Center

October 2013



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About this Book and the Library

The *NetIQ Analysis Center User Guide* provides conceptual information about the NetIQ Analysis Center product (Analysis Center), an overview of Analysis Center components, information about installing and managing Analysis Center, and instructions for configuring reports.

Intended Audience

This book provides information for individuals responsible for understanding Analysis Center concepts, and for system administrators and users responsible for installing, configuring, and reporting with Analysis Center.

Other Information in the Library

The library provides the following information resources:

[NetIQ Analysis Center Management Guide](#)

Provides conceptual information about Analysis Center. This book is intended for system administrators and users responsible for configuring and using Analysis Center, for reporting on AppManager data. This book also provides an overview of the Analysis Center user interfaces and the Help.

Help

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

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1 Introducing Analysis Center

Analysis Center imports raw data from multiple sources such as AppManager repositories, transforms the data into useful information about the computing infrastructure that supports your business, and publishes that information in graphical or tabular reports. You can use these reports to:

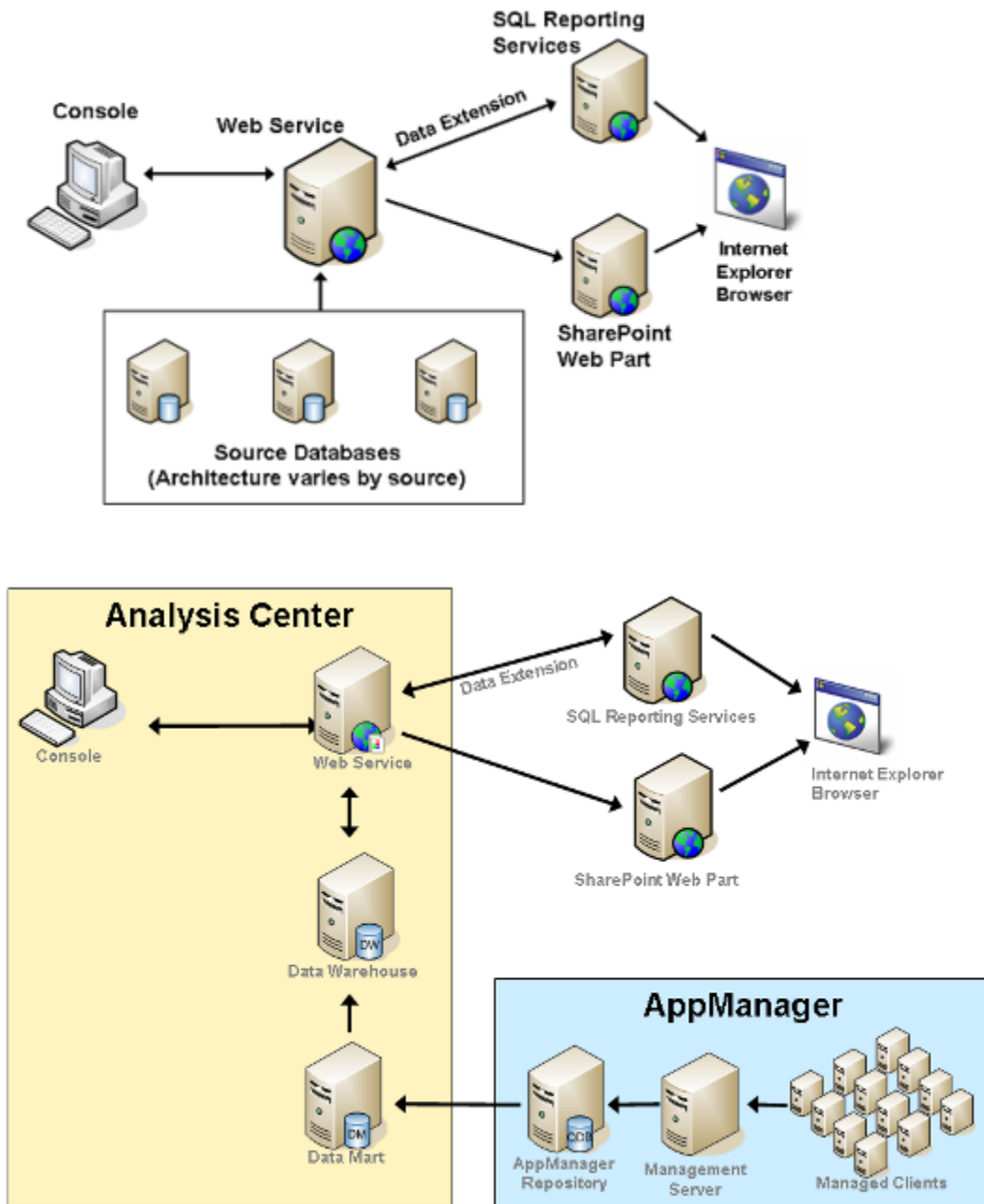
- ♦ **Track performance.** Are my Web servers operating within the limits of current system resources? Is there any degradation of throughput on my network?
- ♦ **Uncover trends.** Is there an increase in the number of HTTP requests handled by my Web servers? Is there an increase in the number and size of messages conveyed by my Exchange Servers?
- ♦ **Correlate events.** Does the volume of customer traffic during the holiday shopping season overwhelm the memory and CPU of my Web servers? Does an increase in the number and size of messages conveyed by my Exchange Servers have a negative impact on network performance?
- ♦ **Make forecasts.** At what point will customer traffic outpace the system resources on my Web servers and when should I upgrade? At what point will the increase in size and number of messages conveyed by my Exchange Servers have a degrading effect on network throughput and when should I upgrade?
- ♦ **Track security events.** Has there been an unusual number of failed login attempts? Are my Web servers subject to frequent port scanning?

Analysis Center is built around Microsoft SQL Server, SQL Server Analysis Services, and SQL Server Reporting Services. Employing these technologies facilitate the transfer and manipulation of large amounts of data. It also ensures rapid retrieval of information, and provides reports of up-to-the minute analyses of your enterprise.

- ♦ [Section 1.1, “Analysis Center Architecture,” on page 12](#)
- ♦ [Section 1.2, “Analysis Center Components,” on page 13](#)

1.1 Analysis Center Architecture

Analysis Center includes a number of software components that you can install on one computer or distribute across multiple computers. The following models illustrate the Analysis Center architecture, and the Analysis Center with Appmanager architecture, with software components installed on separate computers.



The source databases (AppManager repositories) copy the data to the Data Marts, and from the Data Marts to the Data Warehouse. The Analysis Center Console enables you to perform queries on the Data Warehouse using the OLAP server and the Analysis Center Warehouse. The Web Service connects to the Data Warehouse, OLAP, and configuration databases on behalf of the Console to

enable users to perform Analysis Center administrative functions, configure and run reports. The Data Extension makes the same connection with the Web Service to publish, print, and provide Web access to reports using SQL Reporting Services.

1.2 Analysis Center Components

This section describes the components of Analysis Center.

- ♦ [Section 1.2.1, “Data Mart,” on page 13](#)
- ♦ [Section 1.2.2, “Data Warehouse,” on page 13](#)
- ♦ [Section 1.2.3, “Web Service,” on page 14](#)
- ♦ [Section 1.2.4, “SQL Reporting Services and Data Extension,” on page 14](#)
- ♦ [Section 1.2.5, “Console,” on page 14](#)

1.2.1 Data Mart

A Data Mart is a SQL Server database that Analysis Center creates for each AppManager Data Source. A Data Mart collects and processes data from Data Sources, and then stores it in fact and dimension tables to be used by the Data Warehouse. A Data Mart serves several purposes:

- ♦ Stores the data copied from the source databases for processing.
- ♦ Stored procedures process the copied data.
- ♦ Fact and dimension tables store the processed data.
- ♦ The fact tables function as a component of the Data Warehouse.

The SQL Server agent copies the data from the Data Source to the Data Mart, and thereafter to the Data Warehouse, by using SQL Server Integration Services (SSIS) packages.

1.2.2 Data Warehouse

The Data Warehouse is made up of two relational databases and a multidimensional database. The AC_Warehouse and AC_OLAP databases are used for AppManager reporting.

The relational database AC_Configuration supports administrative functions implemented from the Analysis Center Console. The information in the Configuration database includes:

- ♦ Analysis Center security information, such as the level of privileges for each Analysis Center role and which users are assigned to which roles.
- ♦ Connection information: the SQL server and database names used during the generation of AppManager reports.
- ♦ The status of the SSIS packages that are responsible for copying data from one database to another.
- ♦ The status of scheduled reports.
- ♦ Custom schedule configuration.

The relational database AC_Warehouse serves as the immediate source of data for the multidimensional database. The relational database is managed by Microsoft SQL Server, 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 Microsoft SQL Server Analysis Services, and contains aggregations (for example, maximum, minimum, average) of the data copied from the source databases. These aggregated values are stored in cubes designed to facilitate the rapid query of large amounts of data.

Each Data Mart contains the following cubes:

- ♦ Data organized by the local time on the AppManager computer
- ♦ Data organized by the UTC time (Greenwich Mean Time).

A **cube** is a structure for data that uses hierarchical dimensions as an organizing principle. 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 allows you to select data from any point in the hierarchy (for example, all data generated during 2005; all data generated during December 2005; or all data generated December 1, 2005). Given this structure and organization of aggregate values, you can, for example, create reports for:

- ♦ The average, minimum, and maximum use of memory resources by all Exchange Servers for the year 2005.
- ♦ The average growth rate for all SQL Server databases for the month of December 2005.
- ♦ The average daily use of CPU for all Domino servers for 2004 and 2005.

1.2.3 Web Service

The Analysis Center Web Service authenticates Console and Data Extension connections established during report generation and runs the SQL queries that gather report data.

1.2.4 SQL Reporting Services and Data Extension

SQL Reporting Services is a Microsoft addition to SQL Server that facilitates the creation, management, and delivery of reports. The Data Extension is a NetIQ addition that allows Analysis Center reports to be displayed within SQL Reporting Services.

1.2.5 Console

The Console is the Analysis Center user interface, from which you perform administrative functions and generate reports. For more information, see [Chapter 3, “Installing Analysis Center,” on page 33](#). The Analysis Center administrative functions include:

- ♦ Defining Analysis Center users, groups, and permissions sets.
- ♦ For AppManager repositories, setting the schedules for how often data is copied to the Analysis Center Data Warehouse and reconciling resource identities so each computer in an enterprise has a single identity.

You run reports from the Console by setting the report context, and then viewing the results. The context controls for a report let you:

- ♦ Select the data streams and computers
- ♦ Specify the time frame
- ♦ Select which measures of the data you want for your report (for example, average, minimum, maximum)

2 Planning the Installation

Before you install Analysis Center, there are a number of decisions you need to make. This chapter provides information about planning your installation, including the following considerations:

- ♦ The number of computers and SQL Servers you want to use for Analysis Center components (interface, databases, related services).
- ♦ The types of logon accounts you want to use for the various SQL Server services (Windows or local system).
- ♦ The type of authentication you want to use for each SQL Server (Windows or Mixed Mode), and how you want to connect between the various SQL Servers (Windows or SQL Server authentication).
- ♦ The decision to use Report Designer, a component of Microsoft SQL Server Reporting Services, to customize Analysis Center reports.

This chapter includes the following sections:

- ♦ [Section 2.1, “Companion Analysis Center Utilities,” on page 15](#)
- ♦ [Section 2.2, “Distributing Analysis Center Components,” on page 16](#)
- ♦ [Section 2.3, “Deciding Between Windows and SQL Authentication,” on page 17](#)
- ♦ [Section 2.4, “Account Requirements,” on page 19](#)
- ♦ [Section 2.5, “System Requirements,” on page 24](#)
- ♦ [Section 2.6, “Using Named Instances of SQL Server,” on page 29](#)
- ♦ [Section 2.7, “SQL Server Licensing Considerations,” on page 30](#)
- ♦ [Section 2.8, “Analysis Center License Monitoring,” on page 31](#)
- ♦ [Section 2.9, “Preparing Report Designer to Customize Reports,” on page 31](#)

2.1 Companion Analysis Center Utilities

The Utilities folder of the Analysis Center installation kit includes the following utilities:

Utility	Description
ACPreCheckUtility -- Data Source Verification and Size Estimation	The Data Source Verification and Size Estimation utility helps you estimate the sizes needed for the Analysis Center databases and disk space. Consider running this utility before installing Analysis Center.

Utility	Description
NetIQSharedDSNameUpdate -- Shared Data Source Name Update	<p>The Shared Data Source Name Update utility allows you to modify the SSRS shared Data Source name associated with deployed reports. The utility connects to SSRS using the URL specified, creates the new shared Data Source you specify, if necessary, and updates all reports that were deployed with the old Data Source name to the new Data Source name.</p> <p>Analysis Center creates the new shared Data Source using NT authenticated security. After running the utility, you can use the SSRS Management Console to specify credentials for the Data Source.</p> <p>This utility runs as part of upgrade processing to update any previously deployed reports using the old default shared Data Source name "Analysis Center" to the new default shared Data Source name, "AnalysisCenter".</p> <p>For more information about running this utility, see the command line Help.</p>
LegendVerificationUtility -- AM Legend Verification	<p>AM Legend Verification screens the existing legends defined in your AppManager database and identifies any legends that Analysis Center may not be able to resolve.</p> <p>You can run this utility only if you have installed the Analysis Center Data Warehouse on your server. The utility asks for your Analysis Center Data Warehouse login information, and then makes a connection to the Data Warehouse database to perform the legend processing that is available only through Analysis Center.</p> <p>The utility also needs to make a connection to your AppManager database to read the existing legends stored in the AppManager database. For more information about how to use this utility, see the utility help.</p>
NetIQ AC Diag Tool	<p>If you report problems to NetIQ Technical Support, you might be asked to start this utility, which gathers data used to diagnose and solve problems.</p>

2.2 Distributing Analysis Center Components

The Analysis Center components (Data Warehouse, SQL Reporting Services Data Extension, Web Service, and Console) can be installed together on a single computer, installed in any combination on separate computers, or installed individually on separate computers. Your decisions about how to distribute these components should be guided by the volume of data that will be moving from one database to another, the frequency at which data will be processed, the number and frequency of reports that will run against the data, and the amount of data covered in reports.

In general, you can anticipate the following:

- **Console:** demands significant memory and CPU resources for presenting reports.
- **Data Mart database:** each Data Mart requires disk space at least equal to the disk space used by its source of data; demands significant memory and CPU resources for processing data.
- **Data Warehouse relational database:** requires reliable network support to accommodate the volume of data traffic; demands moderate to significant memory and CPU resources to process data.

- ♦ **Data Warehouse multidimensional database:** requires minimal disk space; demands significant memory and CPU resources to process cubes and queries.
- ♦ **Web Service:** at least 512 MB RAM; requires minimal disk and CPU resources.

For more information, see [Section 2.5, “System Requirements,” on page 24](#).

2.3 Deciding Between Windows and SQL Authentication

When you install the Analysis Center Data Warehouse and Web Service, you need to configure the type of authentication used for a number of different connections between Analysis Center components.

During the Data Warehouse installation, the connections that you need to configure are:

- ♦ Data Warehouse SQL Server agent to Data Warehouse SQL Server
- ♦ Data Warehouse SQL Server agent to Data Warehouse Analysis Services
- ♦ Data Warehouse Analysis Services to Data Warehouse SQL Server
- ♦ Data Mart SQL Server agent to Data Mart SQL Server
- ♦ Data Mart SQL Server agent to Data Warehouse SQL Server

During the Web Service installation, those connections are:

- ♦ Web Service to Data Warehouse SQL Server
- ♦ Web Service to Data Warehouse Analysis Server

With the exception of the Data Warehouse SQL Server Agent to Data Warehouse Analysis Services and Web Service to Data Warehouse Analysis Server connections, which must use Windows Authentication, all the others can use either Windows or SQL Server Authentication. Before you install Analysis Center, you will need to make some decisions about the type of authentication you want to use in each case, set up the necessary accounts and permissions, configure each SQL Server to use the appropriate type of authentication, and configure your SQL Server services to use the appropriate accounts. For more information, see [Section 2.4.2, “SQL Server Services,” on page 20](#).

To use Windows Authentication:

- 1 Configure each Windows account as a login for each SQL Server to which that account needs access.
- 2 Add each login to the appropriate Server Role for each SQL Server.
- 3 Configure each SQL Server to use Windows Authentication Mode or Mixed Mode.

To use SQL Server Authentication:

- 1 Create the same login name and password on each SQL Server to which you will connect using that account (the login name and password have to exist locally on each server).
- 2 Add each login to the appropriate Server Role for that SQL Server.
- 3 Configure each SQL Server to use Mixed Mode Authentication.

During installation of the Data Warehouse, you select one of three options for the types of authentication you want to use for connections between the Data Warehouse and any Data Mart SQL Servers. For more information, see [Section 3.3.2, “Installing the Data Warehouse,” on page 35](#).

The options are:

- ♦ [Section 2.3.1, “Default \(Recommended\),” on page 18](#)
- ♦ [Section 2.3.2, “Windows-Only,” on page 18](#)
- ♦ [Section 2.3.3, “Custom,” on page 19](#)

2.3.1 Default (Recommended)

This option is recommended for a fully distributed environment.

Under the Default option, the Data Warehouse SQL Server Agent and Analysis Services use Windows Authentication to connect to the Data Warehouse. In this case, the logon account for each service is used to make the connection. The SQL Server Agent logon account must have administrative permissions for the Data Warehouse SQL Server and Analysis Server (System Administrators server role for the SQL Server). If you do not initially configure the SQL Server Agent account with administrative permissions, you can do so later in the installation.

Under the Default option, Data Mart SQL Server Agents use SQL Server Authentication to connect to the Data Mart and Data Warehouse SQL Servers. In this case, the installation program creates the necessary SQL Server logins and encrypts the passwords.

For this option, the Data Warehouse and Data Mart SQL Servers have to be configured to use Mixed Mode (Windows and SQL Server Authentication).

2.3.2 Windows-Only

This option is not recommended for a fully distributed environment.

Under the Windows-only option, use Windows Authentication for all connections. The logon account for each service is used to make the connection.

- ♦ The Data Warehouse SQL Server and SQL Server Agent, Analysis Services, any Data Mart SQL Servers and SQL Server Agents, and the Analysis Center Web Service must all use the same domain account for their service log-on accounts. The domain account used for these services must have administrative permissions for the Data Warehouse SQL Server, any Data Mart SQL Server, and the Analysis Server (System Administrators server role for the SQL Servers). Administrative permissions for Data Mart SQL Servers must be granted prior to installation. Other administrative permissions can be granted during installation. The domain account must be trusted for delegation.
- ♦ All SQL Server services must have a Service Principle Name.
- ♦ MS OLAPService (Analysis Services) must have a Service Principle Name.
- ♦ For the Windows-only option, the Data Warehouse and Data Mart SQL Servers can be configured to use either Windows Authentication Mode or Mixed Mode.
- ♦ All Analysis Center SQL Servers and the Analysis Server must be added to the Active Directory of their domain.
- ♦ Any domains that host Analysis Center computers must be configured for Kerberos security.
- ♦ On any computer hosting an Analysis Center SQL Server, Microsoft Distributed Transaction Coordinator (DTC) must be configured for network access.
- ♦ All computers hosting Analysis Center components must be trusted for delegation.

The barrier to using Windows authentication for all the connections in a fully distributed environment is the **double-hop** issue. The problem is that the security credentials used to make the connection from Computer A to Computer B cannot be used to make a necessary subsequent

connection from Computer B to Computer C, and so the operation fails. For example, to carry out the OLAP Processing job, the Analysis Server (on Computer A) makes a connection to the Data Warehouse SQL Server (on Computer B) to get dimension data, and makes a subsequent connection from the Data Warehouse SQL Server (on Computer B) to the Data Mart SQL Server (on Computer C) is required to get fact data. The credentials of the Analysis Services logon account are not successfully passed from Computer A to Computer B to Computer C.

If you want to use Windows authentication for every connection between Analysis Center components, you have to install the Data Warehouse SQL Server, Analysis Services, the Web Service, and any Data Mart SQL Servers on the same computer.

2.3.3 Custom

With the Custom option, you can, if you want, use a different type of authentication for each connection.

If you use Windows Authentication, the SQL Server Agent logon account must have administrative permissions for the Data Warehouse SQL Server and Analysis Server (System Administrators server role for the SQL Server). If you do not initially configure the SQL Server Agent account with administrative permissions, you can do so later in the installation. In addition, the logon account for any Data Mart SQL Server Agent must be configured as a member of the System Administrators server role for the Data Warehouse SQL Server and for each Data Mart SQL Server before you install Analysis Center.

If you use SQL Server Authentication for a connection, the login name and password you specify for that connection must already be configured on the relevant SQL Server and must also belong to the System Administrators server role for that SQL Server.

Under the Custom option, Analysis Center does not perform any management of the SQL Server accounts and passwords. Passwords are sent in clear text, which may pose some security risks.

Any SQL Server to which you connect using SQL Server Authentication must be configured to use Mixed Mode (Windows and SQL Server Authentication).

2.4 Account Requirements

This section describes the account requirements for installing Analysis Center and for the SQL Server services that support Analysis Center.

- ♦ [Section 2.4.1, “Analysis Center Installation,” on page 19](#)
- ♦ [Section 2.4.2, “SQL Server Services,” on page 20](#)
- ♦ [Section 2.4.3, “Analysis Center Web Service,” on page 23](#)
- ♦ [Section 2.4.4, “Connection to Data Mart Database,” on page 24](#)

2.4.1 Analysis Center Installation

To install Analysis Center, you need to have administrative access to the computer on which you are installing components. You can use either a domain or local administrator account.

During installation of the Data Warehouse, you are asked whether you want to use Windows or SQL Authentication to connect to that SQL Server. If you use Windows Authentication, the account under which you are running the installation must belong to the System Administrators group for the SQL Server. If you use SQL Authentication, you must specify a SQL Server account that belongs to the System Administrators group for the SQL Server.

You cannot use a SQL Server account whose user name contains spaces, single, or double quotes. You cannot use a SQL Server account whose password contains spaces or ampersand character. However, you can use a SQL Server account whose password contains single or double quotes.

The multidimensional database can be installed on the local computer or on a remote computer.

2.4.2 SQL Server Services

This section describes the permissions required for the various SQL Server service logon accounts under different distribution scenarios. Each example assumes one instance of SQL Server or Analysis Services on a computer.

If you distribute components across different instances of SQL Server on the same computer, the same requirements for permissions apply server to server (for example, from the Data Mart SQL Server to the Data Warehouse SQL Server).

Source Database and Analysis Center Databases on One Computer

Source database and Analysis Center computer (SQL Server and Analysis Server):

Authentication Mode	Required Permissions
Windows-Only Authentication	SQLSERVER <ul style="list-style-type: none">♦ Member of System Administrators server role for the SQL Server SQLSERVERAGENT <ul style="list-style-type: none">♦ Member of System Administrators server role for the SQL Server MS OLAPService <ul style="list-style-type: none">♦ Member of System Administrators server role for the SQL Server NOTE: All services must use the same domain account.
SQL Server and Windows Authentication	SQLSERVER can run as Local System. SQLSERVERAGENT and MS OLAPService must have permissions described above.

Source Database on First Computer; All Analysis Center Databases on Second Computer

Analysis Center computer (SQL Server and Analysis Server):

Authentication Mode	Required permissions
Windows-Only Authentication	<p>SQLSERVER</p> <ul style="list-style-type: none"> ◆ Member of System Administrators server role for the SQL Server ◆ db_datareader database role for the source database <p>SQLSERVERAGENT</p> <ul style="list-style-type: none"> ◆ Member of System Administrators server role for the SQL Server ◆ db_datareader database role for the source database <p>MS OLAPService</p> <ul style="list-style-type: none"> ◆ Member of System Administrators server role for the SQL Server <p>NOTE: All services must use the same domain account.</p>
SQL Server and Windows Authentication	<p>SQLSERVER can run as Local System.</p> <p>SQLSERVERAGENT and MS OLAPService must have permissions described above.</p>

Source Database on First Computer, Data Mart on Second Computer, Data Warehouse on Third Computer

Data Mart computer (SQL Server):

Authentication Mode	Required Permissions
Windows-Only Authentication	<p>SQLSERVER</p> <p>No special requirements</p> <p>SQLSERVERAGENT</p> <ul style="list-style-type: none"> ◆ Member of System Administrators server role for the Data Mart SQL Server ◆ Member of System Administrators server role for the Data Warehouse SQL Server ◆ db_datareader database role for the source database
SQL Server and Windows Authentication	<p>SQLSERVER can run as Local System.</p> <p>SQLSERVERAGENT must have permissions described above.</p>

Data Warehouse computer (SQL Server and Analysis Server):

Authentication Mode	Required Permissions
Windows-Only Authentication	<p>SQLSERVER</p> <ul style="list-style-type: none"> ◆ Member of System Administrators server role for the Data Warehouse SQL Server ◆ db_datareader database role for the source database <p>SQLSERVERAGENT</p> <ul style="list-style-type: none"> ◆ Member of System Administrators server role for the Data Warehouse SQL Server ◆ Member of System Administrators server role for the Data Mart SQL Server ◆ db_datareader database role for the source database <p>MS OLAPService</p> <ul style="list-style-type: none"> ◆ Member of System Administrators server role for the Data Warehouse SQL Server <p>NOTE: All services must use the same domain account.</p>
SQL Server and Windows Authentication	<p>SQLSERVER can run as Local System.</p> <p>SQLSERVERAGENT and MS OLAPService must use Windows authentication and have permissions described above.</p>

Source Database and Each Analysis Center Database on a Separate Computer

Data Mart computer (SQL Server):

Authentication Mode	Required Permissions
Windows-Only Authentication	<p>SQLSERVER</p> <p>No special requirements</p> <p>SQLSERVERAGENT</p> <ul style="list-style-type: none"> ◆ Member of System Administrators server role for the Data Mart SQL Server ◆ Member of System Administrators server role for the Data Warehouse SQL Server ◆ db_datareader database role for the source database
SQL Server and Windows Authentication	<p>SQLSERVER can run as Local System.</p> <p>SQLSERVERAGENT must have permissions described above.</p>

Data Warehouse relational database computer (SQL Server):

Authentication Mode	Required Permissions
Windows-Only Authentication	SQLSERVER <ul style="list-style-type: none">◆ Member of System Administrators server role for the Data Warehouse SQL Server◆ Member of System Administrators server role for the Data Mart SQL Server◆ db_datareader database role for the source database SQLSERVERAGENT <ul style="list-style-type: none">◆ Member of System Administrators server role for the Data Warehouse SQL Server◆ Member of System Administrators server role for the Data Mart SQL Server◆ db_datareader database role for the source database NOTE: All services must use the same domain account.
SQL Server and Windows Authentication	SQLSERVER and SQLSERVERAGENT must have the permissions specified above.

Data Warehouse multidimensional database computer (Analysis Server):

Authentication Mode	Required Permissions
Windows-Only Authentication	MS OLAPService <ul style="list-style-type: none">◆ Member of System Administrators server role for the Data Warehouse SQL Server◆ Member of System Administrators server role for the Data Mart SQL Server
SQL Server and Windows Authentication	MS OLAPService must have the permissions specified above.

2.4.3 Analysis Center Web Service

The Web Service uses impersonation to make connections from the Analysis Center Console and Data Extension to the Analysis Center Data Warehouse, and through a linked server definition, to the Data Mart. **Impersonation** involves using a single account to make connections to various Analysis Center components regardless of which account is used to start the Console. The permissions required of the Web Service impersonation account are described below:

- ◆ The account must belong to the Administrators group on each computer to which it makes a connection. If you are using replicated accounts for different domains, the account can be a local account. Otherwise, it must be a domain account.
- ◆ Connections to the Data Warehouse SQL Server can use either Windows or SQL Server Authentication. In either case, the account must belong to the System Administrators role for the Warehouse SQL Server.

- Connections to the Data Warehouse Analysis Server must use Windows Authentication.
- Connections to a Data Mart SQL Server can use either Windows or SQL Server Authentication. In either case, the account must belong to the System Administrators role for each Data Mart SQL Server.

NOTE: If you create a new domain account for use by the Web Service, you need to restart the `IIS Admin Service` for Internet Information Services to be aware of the account.

2.4.4 Connection to Data Mart Database

During the creation of a Data Source, you are asked to specify whether the Data Warehouse SQL Server Agent connects to the Data Mart database using Windows or SQL Server authentication. If you use SQL Server authentication, the login name you specify must be a System Administrator for the Data Mart SQL Server. For more information, see the [NetIQ Analysis Center Management Guide](#).

2.5 System Requirements

Analysis Center 2.9 components are supported on 32-bit and 64-bit versions of Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, or Windows Server 2012 with Microsoft SQL Server 2005 Service Pack 2, Microsoft SQL Server 2008, Microsoft SQL Server 2008 R2, or Microsoft SQL Server 2012. You can install each Analysis Center component on a separate computer. If you install multiple components on the same computer, they must meet the system requirements.

The following table identifies the Analysis Center components supported on 32-bit and 64-bit platforms.

Component	32-bit	64-bit
Console	Yes	Wow64
Web Service	Yes	Yes
Data Warehouse	Yes	Yes
Data Extension	Yes	Yes

- [Section 2.5.1, “Planning Considerations,” on page 24](#)
- [Section 2.5.2, “Hardware and Software Requirements for Analysis Center Components,” on page 25](#)
- [Section 2.5.3, “Supported Data Sources,” on page 29](#)

2.5.1 Planning Considerations

Consider the following information as you prepare to install Analysis Center:

- Wow64 refers to a 32-bit application emulated on Windows 64-bit platform.
- If you distribute Analysis Center components across multiple computers, you must enable the Remote Registry Service on the computers. Otherwise, the installation fails.
- If you anticipate that your data storage requirements will be significant, NetIQ Corporation recommends SQL Analysis Services Enterprise Edition. If you need assistance determining this, please contact NetIQ Technical Support.

- ♦ If you are reporting on data generated from AppManager version 6.5 UNIX agents, Analysis Center requires that you apply hotfix 51991 for Sun Solaris, HP-UX or Linux, or AppManager for UNIX 6.5 for AIX Service Pack 1 for IBM AIX. If you do not apply the hotfix, the Analysis Center reports display incorrect or missing UNIX data. For more information about obtaining the hotfix, contact NetIQ Technical Support.
- ♦ When you install Analysis Center on Windows Server 2008, Windows Server 2008 R2, or Windows Server 2012, install Internet Information Services (IIS) 7.0 or 8.0 on the Windows Server computer with the following Role Services selected:
 - ♦ Application Development: ASP.NET
 - ♦ Security: Windows Authentication
 - ♦ IIS 6 Management Compatibility

2.5.2 Hardware and Software Requirements for Analysis Center Components

The following tables identify the requirements and supported applications on x86 and x64 platforms, for each component of Analysis Center.

Console Computer

Console System Requirements		
	32-bit	64-bit
Screen Resolution	1024x768 or higher	1024x768 or higher
Processor	600-megahertz (MHz) Pentium III-compatible or faster processor; 1-gigahertz (GHz) or faster processor recommended	1-GHz AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support processor or faster
Operating System	Windows XP Professional, Windows Vista, Windows 7, Windows Server 2003, Windows Server 2008, or Windows 8	Windows XP Professional, Windows Vista, Windows 7, Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, Windows 8, or Windows Server 2012
Memory	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended
Hard Disk	Approximately 100 MB of available hard-disk space for the recommended installation	Approximately 100 MB of available hard-disk space for the recommended installation
Other Requirements	.NET Framework 2.0 Redistributable Package	.NET Framework 2.0 Redistributable Package
	Microsoft Internet Explorer 6.0 to 10.0	Microsoft Internet Explorer 6.0 to 10.0

NOTE: If you install the Console on a computer running Windows Server 2003 or later and plan to connect to a remote Web Service, set the Internet Explorer Security settings for **Internet** and **Local intranet** to **Low** on the computer where you want to install the console.

Data Mart Computer

Data Mart System Requirements

	32-bit	64-bit
Processor	600-megahertz (MHz) Pentium III-compatible or faster processor; 1-gigahertz (GHz) or faster processor recommended	1-GHz AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support processor or faster
Operating System	Windows Server 2003 or Windows Server 2008	Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, or Windows Server 2012
Memory	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended
Hard Disk	Approximately 350 MB of available hard-disk space or more depending on the size of the AM repositories	Approximately 350 MB of available hard-disk space or more depending on the size of the AM repositories
Other Requirements	.NET Framework 2.0 Redistributable Package	.NET Framework 2.0 Redistributable Package
	Microsoft Internet Explorer 6.0 to 10.0	Microsoft Internet Explorer 6.0 to 10.0
	SQL Server 2005 SP2, SQL Server 2008, or SQL Server 2012; same language version as the Data Warehouse SQL Server	SQL Server 2005 SP2, SQL Server 2008, SQL Server 2008 R2, or SQL Server 2012; same language version as the Data Warehouse SQL Server
	SQL Server Integration Services 2005 SP2, SQL Server Integration Services 2008, or SQL Server Integration Services 2012	SQL Server Integration Services 2005 SP2, SQL Server Integration Services 2008, or SQL Server Integration Services 2012
	Microsoft Distributed Transaction Coordinator (MSDTC) service	Microsoft Distributed Transaction Coordinator (MSDTC) service

NOTE: Successful copying from a Data Mart to the Data Warehouse requires that the language editions, collation, sort order, and locale settings match. For example, if the Data Warehouse SQL Server is an English language edition and the Data Warehouse computer is set to the English locale, then the Data Mart SQL Server must also be an English language edition and the Data Mart computer must be set to the English locale.

Data Warehouse Relational Database Computer

Data Warehouse Relational Database System Requirements

	32-bit	64-bit
Processor	600-megahertz (MHz) Pentium III-compatible or faster processor; 1-gigahertz (GHz) or faster processor recommended	1-GHz AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support processor or faster

Data Warehouse Relational Database System Requirements

	32-bit	64-bit
Operating System	Windows Server 2003 or Windows Server 2008	Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, or Windows Server 2012
Memory	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended
Hard Disk	Approximately 350 MB of available hard-disk space or more depending on the size of the Data Marts	Approximately 350 MB of available hard-disk space or more depending on the size of the Data Marts
Other Requirements	.NET Framework 4.0 Redistributable Package	.NET Framework 4.0 Redistributable Package
	Microsoft Internet Explorer 6.0 to 10.0	Microsoft Internet Explorer 6.0 to 10.0
	Microsoft Distributed Transaction Coordinator (MSDTC) service	Microsoft Distributed Transaction Coordinator (MSDTC) service
	SQL Server 2005 SP2, SQL Server 2008, or SQL Server 2012; same language version as the Data Warehouse SQL Server	SQL Server 2005 SP2, SQL Server 2008, SQL Server 2008 R2, or SQL Server 2012; same language version as the Data Warehouse SQL Server
	Microsoft Visual C++ 2012 Update3 Redistributable Package	Microsoft Visual C++ 2012 Update3 Redistributable Package

Data Warehouse Multidimensional Database Computer

Data Warehouse Multi-dimensional Database System Requirements

	32-bit	64-bit
Processor	600-megahertz (MHz) Pentium III-compatible or faster processor; 1-gigahertz (GHz) or faster processor recommended	1-GHz AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support processor or faster
Operating System	Windows Server 2003 or Windows Server 2008	Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, or Windows Server 2012
Memory	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended
Hard Disk	Approximately 350 MB of available hard-disk space, depending on the size of the Data Warehouse	Approximately 350 MB of available hard-disk space, depending on the size of the Data Warehouse

Data Warehouse Multi-dimensional Database System Requirements

	32-bit	64-bit
Other Requirements	.NET Framework 2.0 Redistributable Package	.NET Framework 2.0 Redistributable Package
	Microsoft Internet Explorer 6.0 to 10.0	Microsoft Internet Explorer 6.0 to 10.0
	SQL Server 2005 SP2 Analysis Services, SQL Server 2008 Analysis Services, or SQL Server 2012 Analysis Services	SQL Server 2005 SP2 Analysis Services, SQL Server 2008 Analysis Services, or SQL Server 2012 Analysis Services

If you install the Data Warehouse multidimensional database on a remote Analysis Server, the computer from which you are making the installation must have the Client components from the Analysis Services setup program.

Data Extension Computer

Data Extension System Requirements

	32-bit	64-bit
Processor	600-megahertz (MHz) Pentium III-compatible or faster processor; 1-gigahertz (GHz) or faster processor recommended	1-GHz AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support processor or faster
Operating System	Windows Server 2003 or Windows Server 2008	Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, or Windows Server 2012
Memory	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended
Hard Disk	Approximately 350 MB of available hard-disk space for the recommended installation	Approximately 350 MB of available hard-disk space for the recommended installation
Other Requirements	.NET Framework 2.0 Redistributable Package	.NET Framework 2.0 Redistributable Package
	Microsoft Internet Explorer 6.0 to 10.0	Microsoft Internet Explorer 6.0 to 10.0
	SQL Server 2005 SP2 Reporting Services, SQL Server 2008 Reporting Services, or SQL Server 2012 Reporting Services	SQL Server 2005 SP2 Reporting Services, SQL Server 2008 Reporting Services, or SQL Server 2012 Reporting Services

Web Service Computer

Web Service System Requirements		
	32-bit	64-bit
Processor	600-megahertz (MHz) Pentium III-compatible or faster processor; 1-gigahertz (GHz) or faster processor recommended	1-GHz AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support processor or faster
Operating System	Windows Server 2003 or Windows Server 2008 with Internet Information Services 6.0, 7.0, 7.5, or 8.0 and ASP.NET enabled	Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, or Windows Server 2012 with Internet Information Services 6.0, 7.0, 7.5, or 8.0 and ASP.NET enabled
Memory	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended	512 megabytes (MB) of RAM or more; 1 gigabyte (GB) or more recommended
Hard Disk	Approximately 350 MB of available hard-disk space for the recommended installation	Approximately 350 MB of available hard-disk space for the recommended installation
Other Requirements	.NET Framework 2.0, 3.0, or 3.5 and ASP.NET enabled	.NET Framework 2.0, 3.0, or 3.5 and ASP.NET enabled
	Microsoft Internet Explorer 6.0 to 10.0	Microsoft Internet Explorer 6.0 to 10.0
	Microsoft Internet Information Services (IIS) 6.0, 7.0, 7.5, or 8.0 and ASP.NET 2.0	Microsoft Internet Information Services (IIS) 6.0, 7.0, 7.5, or 8.0 and ASP.NET 2.0
	ADOMD.NET 10, 11	ADOMD.NET 10, 11

If you create a new domain account for use by the Web Service, you need to restart the **IIS Admin Service** in order for Internet Information Services to be aware of the account.

2.5.3 Supported Data Sources

Analysis Center supports Data Sources from NetIQ AppManager 6.0 and later. For more information, see the [NetIQ Analysis Center Management Guide](#).

2.6 Using Named Instances of SQL Server

If you use named instances of SQL Server on different computers for any of the Analysis Center databases, you need to ensure that each client of a database can connect to that named instance.

Use the SQL Server Client Network Utility to configure connectivity from each client computer to each named instance of SQL Server. For example, from the Data Warehouse SQL Server computer to the SQL Server instance for the Data Mart.

To configure connectivity:

- 1 From the client computer, start the Client Network Utility. Click **Start > Programs > Microsoft SQL Server > Client Network Utility**. The Client Network Utility dialog box is displayed.
- 2 On the General tab, enable TCP/IP and set it as the first protocol.

- 3 Select **TCP/IP** and click **Enable**.
- 4 Click the arrows to move **TCP/IP** to the top of the **Enabled protocols by order** list.
- 5 On the **Alias** tab, click **Add** to open the Add Network Library Configuration dialog box.
- 6 In the **Server alias** field, specify the SQL Server\Instance name to which the client will connect. The same name is displayed in the **Server name** field.
- 7 In the Network libraries panel, select **TCP/IP**.
- 8 In the Connection parameters panel, specify the **Port number** through which the connection to the SQL Server is made.
If you do not know the port number, select **Dynamically determine port**.

NOTE: It is preferable to specify the port number. The process of dynamically determining the port may cause security alerts in circumstances where there is monitoring for port attacks. In circumstances where the client and server are separated by a firewall, the system administrator will need to know which port to open.

- 9 Click **OK** to close the Add Network Library Configuration dialog box.
- 10 Click **OK** to close the Client Network Utility dialog box.

2.7 SQL Server Licensing Considerations

There are a number of different licensing options you can use for your SQL Server environment (for example, per CPU, per user, per device). Which option you choose should be based on the unique circumstances of your business. The following summary of connections to SQL Server components is provided to help you decide which type of licensing will suit you best.

This Analysis Center Component	Connects to this SQL Server Component
Data Warehouse SQL Server Agent	<ul style="list-style-type: none"> ◆ Each Data Mart SQL Server ◆ The Data Warehouse SQL Server ◆ Analysis Services
Analysis Services	<ul style="list-style-type: none"> ◆ The Data Warehouse SQL Server ◆ Each Data Mart SQL Server
Data Mart SQL Server Agent	<ul style="list-style-type: none"> ◆ The associated source database SQL Server ◆ The associated Data Mart SQL Server ◆ The Data Warehouse SQL Server
Web Service	<ul style="list-style-type: none"> ◆ The Data Warehouse SQL Server ◆ Analysis Services
Data Extension	<ul style="list-style-type: none"> ◆ The database via the Web Service
Console	<ul style="list-style-type: none"> ◆ The database via the Web Service ◆ Reporting Services

2.8 Analysis Center License Monitoring

For AppManager Data Sources, Analysis Center requires one license for each server (Managed Agent) that provides Analysis Center data. A license monitor shows you how many licenses are installed at your site and how many AppManager servers are being monitored. The number of Analysis Center servers at your site should be less than or equal to the number of installed licenses.

If the number of Analysis Center servers at your site exceeds your licenses, when you start the Console, Analysis Center displays a warning message but you can still run or deploy reports.

2.9 Preparing Report Designer to Customize Reports

You can use the Report Designer component of SQL Server Reporting Services (SSRS) to customize Analysis Center reports. To use Report Designer, you must first install Visual Studio .NET 2005, and then install SSRS on that computer. You must also then install the Analysis Center Data Extension on that computer. For more information, see [Chapter 14, “Customizing Reports,” on page 137](#).

3 Installing Analysis Center

This chapter provides information about installing or upgrading Analysis Center components, and migrating Analysis Center data.

- ♦ [Section 3.1, “Overview of Analysis Center Installation,” on page 33](#)
- ♦ [Section 3.2, “Performing the Installation,” on page 34](#)
- ♦ [Section 3.3, “Running the Setup Program,” on page 34](#)
- ♦ [Section 3.4, “Modifying an Installation,” on page 37](#)
- ♦ [Section 3.5, “Modifying the Web Service Impersonation Account,” on page 38](#)

3.1 Overview of Analysis Center Installation

The Analysis Center setup program allows you to install the Analysis Center components on 32-bit (x86) or 64-bit (x64) platforms. The x64 setup option installs all components on 64-bit computers, but installs the Console as a 32-bit application. For more information about which components are supported in 64-bit environments, see [Section 2.5, “System Requirements,” on page 24](#).

You can install these components individually or in any combination. If you are going to install the Analysis Center components on separate computers, install the components in this order:

1. Data Warehouse
2. Web Service
3. Data Extension
4. Console

If you are upgrading Analysis Center, see [Chapter 4, “Upgrading to Analysis Center 2.9,” on page 39](#). If you are migrating data to a new system, see [Chapter 5, “Migrating Analysis Center Data,” on page 43](#).

For information about modifying your Analysis Center installation, see [Section 3.4, “Modifying an Installation,” on page 37](#).

NOTE: Perform the following steps to install Data Warehouse on the SQL cluster environment:

1. Install Data Warehouse on the active node.
 2. Perform a failover.
 3. Install Data Warehouse on the second node, which is now the active node.
-

3.2 Performing the Installation

Log on to the computer on which you want to install Analysis Center using an account that is a member of the local Administrators group. Close all open applications and run the setup program from the Analysis Center installation kit. If you double-click `setup.exe`, the product installation preview page opens in your browser.

If you want to install an Analysis Center component on the computer containing the installation kit, you can start the installer by selecting the Production Setup tab and then clicking **Install NetIQ Analysis Center (x86)** or **Install NetIQ Analysis Center (x64)**.

If you install Analysis Center components on multiple computers, copy the installation kit to a server at your site that the Analysis Center computer can access. You can then start the installation kit at each Analysis Center computer from the shared server. For example, from `\\SWInstaller\ACInstall\setup.exe`.

NOTE: Before running the Analysis Center setup program, close SQL Server Management Studio.

3.3 Running the Setup Program

This section describes the steps to install Analysis Center.

To install Analysis Center:

- 1 Log on with an administrator account to the computer where you want to install an Analysis Center component.
- 2 Run `Setup.exe` in the root folder of the installation kit.
- 3 On the Setup tab, click the appropriate option as follows:
 - ♦ To install Analysis Center on an x86 computer, click **Begin x86 Setup**.
 - ♦ To install Analysis Center on an x64 computer, click **Begin x64 Setup**.
- 4 In the **License Agreement** window, click **Yes** to accept the terms of the license agreement and proceed with the installation, or click **No** to exit the setup program.
- 5 In the **Feature Selection** window, select the Analysis Center component that you want to install on this computer.
- 6 Complete the setup program by following the instructions. For more information about fields on a window, see the Help.

The following sections describe how to install each separate component:

- ♦ [Section 3.3.1, “Recording Installation Settings,” on page 35](#)
- ♦ [Section 3.3.2, “Installing the Data Warehouse,” on page 35](#)
- ♦ [Section 3.3.3, “Installing the Analysis Center Web Service,” on page 36](#)
- ♦ [Section 3.3.4, “Installing the Data Extension,” on page 36](#)
- ♦ [Section 3.3.5, “Installing the Analysis Center Console,” on page 37](#)

3.3.1 Recording Installation Settings

Before starting the setup program, you can configure the setup program to record the installation settings that you specify on the installation dialogs. You can then reinstall Analysis Center in batch mode by issuing a single command.

To turn on recording and create a recording file `windows\setup.iss`, start the Analysis Center (x86) or Analysis Center (x64) setup program with the `-r` switch:

For example, `NetIQAnalysisCenterSetup_x86 -r`

In the future, you can reinstall Analysis Center components on this computer, bypassing the installation dialog boxes, by issuing this command:

```
NetIQAnalysisCenterSetup_x86 -s -f1"c:\Windows\setup.iss" -  
f2"c:\Windows\logfile.log"
```

`NetIQAnalysisCenterSetup_x86` is located in the `analysis_center\setup` folder of the installation kit.

If the installation kit is stored on a remote server, issue these commands from **Start > Run**. If the installation kit is stored locally on the Analysis Center computer, you can open a command prompt.

3.3.2 Installing the Data Warehouse

You can install the Data Warehouse on a local computer or on a remote computer. If you install Analysis Center on a SQL Server failover cluster, run the Analysis Center Data Warehouse setup on each node of the cluster, beginning with the node where SQL Server is in the Active mode. If you install the Data Warehouse on an Analysis Services failover cluster, you must use the Remote Analysis Server option.

SQL Server System Administrator permissions are required for installation of the Data Warehouse relational database.

If you are going to connect to the SQL Server instance where you are making the installation using the Windows account under which you are running the installation, that account must have System Administrator permissions for that SQL Server. For more information about Data Warehouse, see [Section 1.2.2, "Data Warehouse," on page 13](#).

NOTE: Do not install more than one Data Warehouse on a single Analysis Server. Otherwise, the cube processing job will fail.

To install the Data Warehouse:

- 1 Log on to the computer where you want to install the Data Warehouse with an account that has SQL system administrator privileges. For more information, see [Section 3.3, "Running the Setup Program," on page 34](#).
- 2 In the **Feature Selection** dialog box, select **Data Warehouse**.
- 3 Click **Next**.
- 4 Complete the setup program by following the instructions on the pages. For more information about fields, see the Help.

3.3.3 Installing the Analysis Center Web Service

If you install the Data Warehouse and Web Service on computers that are in different domains, and if you chose SQL authentication when installing the Web Service, the account under which you run the setup program must have Administrator permissions on the Data Warehouse computer.

Do not install the Web Service on the following:

- ♦ Domain Controller. If you do, you will not be able to log in to Analysis Center.
- ♦ Computers where IIS 6.0 has *IIS 5.0 isolation mode* enabled. If you do, Web Service installation will disable that setting and possibly cause some currently installed Web applications to malfunction.

For more information about Web Service, see [Section 1.2.3, “Web Service,” on page 14](#).

To install the Analysis Center Web Service:

- 1 Log on to the computer where you want to install the Web Service with an account that has SQL system administrator privileges. For more information, see [Section 3.3, “Running the Setup Program,” on page 34](#).
- 2 In the **Feature Selection** dialog box, select **Analysis Center Web Service**.
- 3 Click **Next**.
- 4 Complete the setup program by following the instructions on the pages. For more information about fields, see the Help.

3.3.4 Installing the Data Extension

If you are going to use Report Designer to customize reports, install the Data Extension on the computer where SQL Server Reporting Services is installed. For more information about SQL Reporting Services and Data Extension, see [Section 1.2.4, “SQL Reporting Services and Data Extension,” on page 14](#).

To install the Data Extension:

- 1 Log on to the computer where you want to install the Data Extension with an account that has SQL system administrator privileges. For more information, see [Section 3.3, “Running the Setup Program,” on page 34](#).
- 2 In the **Feature Selection** dialog box, select SQL Reporting Services Data Extension.
- 3 Click **Next**.
- 4 Complete the setup program by following the instructions on the pages. For more information about fields, see the Help.

3.3.5 Installing the Analysis Center Console

Install the Analysis Center Console to generate reports and manage your Analysis Center installation. For more information about the Analysis Center Console, see [Section 1.2.5, “Console,” on page 14](#).

To install the Analysis Center Console:

- 1 Log on to the computer where you want to install the Console with an account that has SQL system administrator privileges. For more information, see [Section 3.3, “Running the Setup Program,” on page 34](#).
- 2 In the **Feature Selection** dialog box, select Analysis Center Console.
- 3 Click **Next**.
- 4 Complete the setup program by following the instructions on the pages. For more information about fields, see the Help.

3.4 Modifying an Installation

If you start the setup program on a computer that is hosting an Analysis Center component, you can modify the installation.

To add additional components:

- 1 From the Control Panel Programs list, select **NetIQ Analysis Center**.
- 2 Select **Modify**, and click **Next**. The Feature Selection dialog box opens, showing the components that you *can* install and components that *are* installed. Installed components are selected by default.
- 3 Select the additional components that you want to install. Leave the currently installed components that you want to keep selected.
- 4 The **Repair** operation reinstalls any installed Analysis Center components on the computer.
- 5 The **Remove** operation removes all installed Analysis Center components. To remove a currently installed component during the modify operation, clear the selection for that component.
- 6 When you click **Finish** on the last dialog box of the program, the uninstallation of Analysis Center appears to be complete; however, the removal of SSIS packages and SQL Server Agent jobs continues until they are all removed.

When you remove Analysis Center, the removal of SSIS packages and SQL Server Agent jobs can take several minutes, depending on the number of packages and jobs, and the extent to which your Analysis Center environment is distributed among different computers.

There is no option to install the Data Warehouse during a modify operation. This safeguard is implemented to help minimize the confusion that would result from having multiple Data Warehouses installed in a single Analysis Center environment.

If you are removing Analysis Center in preparation for a new installation, verify that all SSIS packages and SQL Server Agent jobs have been removed before installing the program again.

3.5 Modifying the Web Service Impersonation Account

If, after installing the Analysis Center Web Service, you need to modify the impersonation account information (for example, if the account password has changed), use the Internet Information Services Manager to update the Application Pool identity for Analysis Center for IIS 6.0, 7.0, 7.5, and 8.0. For more information, see the IIS online help.

4 Upgrading to Analysis Center 2.9

You can upgrade from Analysis Center 2.7.5 or 2.8 to Analysis Center 2.9, and install all the components on a single computer or in a distributed environment. Before you install Analysis Center 2.9, ensure that your system meets the requirements of each Analysis Center component. For more information about requirements, see [Section 2.5, “System Requirements,” on page 24](#).

- ♦ [Section 4.1, “Upgrade Considerations,” on page 39](#)
- ♦ [Section 4.2, “Backing Up Databases Before Upgrading,” on page 40](#)
- ♦ [Section 4.3, “Upgrading on a Single Computer,” on page 40](#)
- ♦ [Section 4.4, “Upgrading in a Distributed Environment,” on page 41](#)

4.1 Upgrade Considerations

Consider the following information before upgrading to Analysis Center 2.9:

- ♦ If you are upgrading both SQL Server and Analysis Center, upgrade Analysis Center first and then the SQL Server.
- ♦ If the Analysis Center environment is distributed and runs more than one version of SQL Server, you need to install SQL Server Client Tools on the Data Warehouse computer. The Client Tools version must match the SQL Server version of the Data Mart computer.
 - ♦ If SQL Server 2005 is installed on the Data Mart computer, install the following four SQL Server 2005 Client Tools on the Data Warehouse computer: Connectivity Components, Software Development Kit, Legacy Components, and Management Tools. They are located under Client Components in the SQL Server 2005 setup program.
 - ♦ If SQL Server 2008 is installed on the Data Mart computer, install the following three SQL Server 2008 Client Tools on the Data Warehouse computer: Client Tools Connectivity, Client Tools SDK, and SQL Client Connectivity SDK. They are located under Shared Features in the SQL Server 2008 setup program.
 - ♦ If SQL Server 2012 is installed on the Data Mart computer, install the following three SQL Server 2012 Client Tools on the Data Warehouse computer: Client Tools Connectivity, Client Tools SDK, and SQL Client Connectivity SDK. They are located under Shared Features in the SQL Server 2012 setup program.

NOTE: Perform the following steps to upgrade Data Warehouse on the SQL cluster environment:

1. Upgrade Data Warehouse on the active node.
 2. Perform a failover.
 3. Upgrade Data Warehouse on the second node, which is now the active node.
-

4.2 Backing Up Databases Before Upgrading

Before you upgrade, back up the following Analysis Center databases of your current version of Analysis Center: AC_Warehouse and AC_Configuration databases on the Data Warehouse, and all Data Mart databases. You must belong to the System Administrators group for the SQL Server, using a domain or local administrator account.

To back up Analysis Center databases:

- 1 Open the Analysis Center Console and do the following tasks:
 - 1a Ensure that there are no pending Data Sources by right-clicking each pending Data Source and selecting either **Create** or **Remove**.
 - 1b After the ETL and OLAP Processing jobs running for each Data Source are complete, disable the Data Sources.
 - 1c Close all Analysis Center Consoles.
- 2 Start SQL Server Enterprise Manager.
- 3 Connect to the Data Warehouse SQL Server and disable the OLAP Processing job.
- 4 Connect to the Data Mart SQL Server and disable the ETL Processing jobs for the Data Source.
- 5 Do the following tasks on the AC_Warehouse, AC_Configuration, and each Data Mart database:
 - 5a Expand the computer with the database.
 - 5b Right-click and select **All Tasks > Backup Database**.
 - 5c On the General tab, click **Add** and then specify the **File name** by clicking [...] in the Select Backup Destination dialog box. Click **OK**.

4.3 Upgrading on a Single Computer

You can upgrade Analysis Center on a single computer.

To upgrade all components on a single computer:

- 1 Log on to the computer where you want to upgrade using an account that has SQL system administrator privileges.
- 2 If you installed the Analysis Center Data Extension, first uninstall the Data Extension using the **Modify** option of the Analysis Center setup program.
- 3 If you are upgrading SQL Server, upgrade Analysis Center before upgrading SQL Server. For more information about upgrading the SQL Server, see the [Microsoft SQL Server documentation](#).
- 4 Upgrade Analysis Center by running the Analysis Center setup program.
- 5 Install the Data Extension using the **Modify** option of the Analysis Center setup program.
- 6 Start the Analysis Center Console.

4.4 Upgrading in a Distributed Environment

You can also upgrade Analysis Center in a distributed environment.

To upgrade in a distributed environment:

- 1 If you installed the Analysis Center Data Extension, use the **Modify** option of the Analysis Center setup program to uninstall the Data Extension from the SQL Server Reporting Services computer.
- 2 If you are upgrading the SQL Server, upgrade the SQL Server on the following components of Analysis Center *after* installing Analysis Center:
 - ♦ The SQL Server instance containing the Data Warehouse and Configuration database (required).
 - ♦ The SQL Server Analysis Services instance containing the AC_OLAP database (required).
 - ♦ The SQL Server Reporting Services instance containing the Data Extension component (required).
 - ♦ The SQL Server instances containing the Data Marts (optional upgrade).
- 3 Run the Analysis Center setup program to upgrade the Data Warehouse, Web Service, and Console components on each of the SQL Server instances running these components.
- 4 Install the Data Extension using the **Modify** option of the Analysis Center setup program.
- 5 Start the Analysis Center Console.

5 Migrating Analysis Center Data

This chapter provides information about migrating data from a previous version of Analysis Center to a new system. You can use the Data Migration Utility to move Analysis Center system from one server to another, typically from a 32-bit, older version of Analysis Center to a 64-bit, newer version of Analysis Center, or to move from an older version of SQL Server to a newer version of SQL Server.

- ♦ [Section 5.1, “Understanding the Data Migration Process,” on page 43](#)
- ♦ [Section 5.2, “Preparing for Migration,” on page 43](#)
- ♦ [Section 5.3, “Backing Up Databases Before Migration,” on page 44](#)
- ♦ [Section 5.4, “Installing Analysis Center 2.9,” on page 45](#)
- ♦ [Section 5.5, “Restoring Databases,” on page 45](#)
- ♦ [Section 5.6, “Using the Data Migration Utility,” on page 46](#)
- ♦ [Section 5.7, “Deploying Reports After Data Migration,” on page 48](#)

5.1 Understanding the Data Migration Process

The following list is an overview of the data migration process.

- 1 Disable all your Data Sources using the Analysis Center Console. For more information, see [Section 5.2, “Preparing for Migration,” on page 43](#).
- 2 Back up your Analysis Center databases. For more information, see [Section 5.3, “Backing Up Databases Before Migration,” on page 44](#).
- 3 Install the newer version of Analysis Center on the new server. For more information, see [Section 5.4, “Installing Analysis Center 2.9,” on page 45](#).
- 4 Restore the databases to the new server. For more information, see [Section 5.5, “Restoring Databases,” on page 45](#).
- 5 Run the Data Migration Utility and enable all your Data Sources using the Analysis Center Console. For more information, see [Section 5.6, “Using the Data Migration Utility,” on page 46](#).
- 6 Perform post-migration steps related to deployed reports. For more information, see [Section 5.7, “Deploying Reports After Data Migration,” on page 48](#).

5.2 Preparing for Migration

Before backing up the databases and using the Data Migration Utility, verify the following information:

- ♦ There are no pending Data Sources. Right-click each pending Data Source in the Analysis Center Console, and select either **Create** or **Remove**.

- ♦ All the Data Sources are disabled. After the ETL and OLAP Processing jobs that are running for each Data Source are complete, disable the Data Sources using the Analysis Center Console. Then close all Analysis Center Consoles.
- ♦ The collation order of the source SQL Server computer (that contains the current version of the Analysis Center databases) and the target SQL Server computer (for the newer version of Analysis Center databases) is the same. You can define the SQL Server collation order when you install SQL Server. The default collation order is based on the locale setting of the operating system. You cannot change the collation order after installation. If the collation orders do not match, re-install SQL Server. For more information about the collation order, see the [Microsoft SQL Server documentation](#).
- ♦ The SQL Server account performing the upgrade has db_owner permissions on the AC_Configuration and AC_Warehouse databases.

5.3 Backing Up Databases Before Migration

Before you migrate data, back up the Data Warehouse, Data Mart, and OLAP databases of your current version of Analysis Center. You must belong to the System Administrators group for the SQL Server, using a domain or local administrator account. You need to back up the following Analysis Center databases:

- ♦ AC_Warehouse database on the Data Warehouse
- ♦ AC_Configuration database on the Data Warehouse
- ♦ All Data Mart databases
- ♦ AC_OLAP database

To back up Analysis Center:

- 1 Start SQL Server Enterprise Manager.
- 2 Connect to the Data Warehouse SQL Server and disable the OLAP Processing job.
- 3 Verify whether ETL Processing Jobs is disabled and disable jobs if its not disabled.
- 4 Perform the following tasks on the AC_Warehouse, AC_Configuration, and each Data Mart database:
 - 4a Expand the computer with the database.
 - 4b Right-click and select **All Tasks > Backup Database**.
 - 4c On the General tab, click **Add** and then specify the **File name** by clicking [...] in the Select Backup Destination dialog box. Click **OK**.
- 5 Perform the following tasks on the AC_OLAP database:
 - 5a Login to an SSAS (SQL Server Analysis Services) instance from SSMS (SQL Server Management Studio).
 - 5b Right Click the SSAS database you want to backup.
 - 5c Select **Back Up...**

You can see that the selected database name appears in the Database field and you can provide the name of the backup file. If you do not specify the path, the database backup will be written to the default folder (for example, C:\Program Files\Microsoft SQL Server\MSSQL.2\OLAP\Backup).

5.4 Installing Analysis Center 2.9

The following steps describe how to install Analysis Center in preparation for restoring the databases on the new system.

- 1 Run the Analysis Center 2.9 setup program. Install Analysis Center 2.9 on the *new* Data Warehouse computer using the same installation parameters used for the older version of the Data Warehouse computer. You can specify new locations for the Analysis Center components.
- 2 After the first successful completion of the OLAP Processing job, disable the job on the Analysis Center 2.9 Data Warehouse computer.
- 3 (Optional) Back up the Analysis Center 2.9 AC_Configuration and AC_Warehouse SQL databases so you have a copy of them at the time of the initial installation.
- 4 Connect to SQL Server using an account that has system administrator privileges.

5.5 Restoring Databases

The following steps describe how to restore the backed up databases of Analysis Center system from one server to another - typically from a 32-bit, older version of Analysis Center to a 64-bit, newer version of Analysis Center - or to move from an older version of SQL Server to a newer version of SQL Server.

NOTE: The newly installed SQL Server must have the same collation/sort order as defined in the source databases that you want to restore. For more information about the collation order, see [Section 5.2, “Preparing for Migration,” on page 43](#).

To restore the backed up databases of the older version of Analysis Center:

- 1 Start SQL Server Management Studio and connect to the SQL Server.
- 2 Expand the computer where the AC_Warehouse and AC_Configuration databases are located.
- 3 Right-click and select **Tasks > Restore > Database**.
- 4 Under **Destination for restore**, enter the database name.
- 5 Under **Source for restore**, select **From device** and click [...].
- 6 In the Specify Backup dialog box:
 - ♦ Select **File** in the Backup Media list.
 - ♦ Click **Add** to browse for the file where you saved the database backup.
- 7 Click OK.
- 8 Select **Restore** under **Select the backup sets to restore**.
- 9 Click **Options** under **Select a page pane**.
- 10 Select **Overwrite the existing database** under **Restore options**, and retain the default options under **Recovery state** to restore the following databases:
 - ♦ AC_Configuration database of the older version of Analysis Center to Analysis Center 2.9 AC_Configuration database.
 - ♦ AC_Warehouse database of the older version of Analysis Center to Analysis Center 2.9 AC_Warehouse database.
- 11 Repeat Steps 2 through 10 to restore the Data Mart databases.

- 12** Restoring Analysis Service Database (AC_OLAP) using SQL Server Management Studio GUI:
- 12a** Connect to SQL Server Analysis Service Instance using SQL Server Management Studio.
 - 12b** In Object Explorer, right click the Databases node and select **Restore...**
 - 12c** In the Restore Database window, click **Browse...** next to Backup file text box under Restore Source; this displays the Locate Database Files window.
 - 12d** In the Locate Databases Files window, specify the path where the analysis service database backup file is stored, and click OK to save the Restore Source information.
 - 12e** In the Restore Database window, click **Browse...** next to Storage Location text box under Restore Target; this displays Browse for Remote Folder window. Here, you need to select the path where the Analysis Service database needs to be restored; click OK to save the changes and return to the Restore Database window.
 - 12f** Click OK to restore the Analysis Service Database.
 - 12g** Change the connection string of AC_OLAP database and point to correct Warehouse. On the Analysis Services for the DB AC_OLAP expand the node, Go to Datasources Node and expand it. Right click on DS_ACWarehouse On properties modify the value for the connection string, as shown below:
(Conditional) If you are using SQL 2008, specify the following values:
 - ♦ Provider: Native OLE DB\SQL Server Native Client 10.0
 - ♦ Server Name: <nameServer\instance where AC_Warehouse DB is located>
 - ♦ DB Name: AC_Warehouse(Conditional) If you are using SQL 2012, specify the following values:
 - ♦ Provider: Native OLE DB\SQL Server Native Client 11.0
 - ♦ Server Name: <nameServer\instance where AC_Warehouse DB is located>
 - ♦ DB Name: AC_WarehouseClick OK.

5.6 Using the Data Migration Utility

After you restore the databases, you can run the Data Migration Utility to migrate data from one server to another - typically from a 32-bit, older version of Analysis Center to a 64-bit, newer version of Analysis Center - or to move from an older version of SQL Server to a newer version of SQL Server.

You need to run the Data Migration Utility twice: once in Migration mode and once in Post Migration mode. Post-migration allows you to configure SQL Server Reporting Services and to retain the aggregate values of the previous version of Analysis Center Data Sources.

To migrate data:

- 1** Start the Data Migration Utility in the program folder where you installed it, typically `..\Program Files\NetIQ\Analysis Center\Data Migration Utility`.
- 2** In the Welcome dialog box, click **Migration**, and then click **Next**.

- 3 Provide information in the following fields to specify the account to use to log on to the new Data Warehouse instance, and then click **Next**.

Field	Action
New Data Warehouse Server Name	Enter a valid name for the new Data Warehouse instance where you want to migrate data from a previous installation. Use the format <i>ServerName [/Instance]</i> .
Login Using Windows or SQL Server Authentication	Choose whether the account used to connect to the new Data Warehouse instance will use Windows Authentication or SQL Server Authentication.
Login Name and Password	If you selected Login Using SQL Server Authentication , enter the login name and password for the account. The login name must have write permissions for the AC_Configuration and AC_Warehouse databases.
Test Connection	Click Test Connection to verify that the Data Warehouse instance is accessible.
Analysis Server Name	Enter a valid name for the Analysis Services instance where Analysis Center 2.9 is installed. Use the format <i>ServerName [/Instance]</i> .

- 4 In the Data Source dialog box, review the list of Data Sources in the **Data Source Name** column and specify the names for the new Data Mart instance and Data Mart database in the following fields, and then click **Next**.

Field	Action
New Data Mart Server Name	Enter the name for the new Data Mart instance where you restored the Data Mart database backups. Use the format <i>ServerName [/Instance]</i> .
New Data Mart Database Name	Enter the name for the new Data Mart database that you restored.
Login Name and Password	Enter the login name and password for the Data Source if you are using SQL Server Authentication.

- 5 In the Input Summary dialog box, review the details of the Data Warehouse, Data Sources, and Analysis Services instances to migrate. To start migrating data, click **Migrate**.
- 6 Review the Results Summary and click **Finish** to exit the Data Migration Utility.
- 7 On the instance where you installed the Analysis Center 2.9 Data Warehouse, run the Analysis Center 2.9 setup program in **Repair** mode.
- 8 Start the Data Migration Utility. In the Welcome dialog box, click **Post Migration** and click **Next**.
- 9 Specify the account to use to log on to the new Data Warehouse instance by providing information in the fields, as you did in Step 3. Enter a valid name for the Reporting Services instance, using the format *ServerName [/Instance]* , and click **Next**.
- 10 In the Results Summary dialog box, click **Finish** to exit the Data Migration Utility.

- 11 Start the Analysis Center 2.9 Console and enable all the Data Sources.
- 12 After the first successful completion of the ETL processing jobs for all Data Sources, enable the OLAP processing job. After the first successful completion of the OLAP processing job, you can begin generating reports.

5.7 Deploying Reports After Data Migration

There are special considerations for deploying reports, depending on your version of Analysis Center and the version of SQL Server Reporting Services.

- ♦ [Section 5.7.1, “Deploying Reports Created in an Analysis Center 2.7 or Later Version,” on page 48](#)
- ♦ [Section 5.7.2, “Deploying Reports Created in an Analysis Center 2.6 Environment,” on page 48](#)

5.7.1 Deploying Reports Created in an Analysis Center 2.7 or Later Version

If your system was running Analysis Center 2.7 or later version before you migrated data to a system running Analysis Center 2.9, you need to update the default reporting server location to deploy reports. The following steps describe how to obtain the URL of the SQL Server Reporting Services server and then update the URL in Analysis Center.

To update the default location of the SQL Server Reporting Services server:

- 1 Open the Reporting Services Configuration Manager.
- 2 Connect to the report server instance where SQL Server Reporting Services is located. In the Reporting Services Configuration Connection dialog box, enter the server name and report server instance, and click **Connect**.
- 3 In the Reporting Services Configuration Manager window, click Web Service URL in the left pane.
- 4 Copy the URL from Report Server Web Service URLs box.
- 5 Open the Analysis Center Console and click **Tools > Options > Reporting Services**.
- 6 In the Default Report Server Location box, paste the URL of the reporting server, and click **OK**.

5.7.2 Deploying Reports Created in an Analysis Center 2.6 Environment

If you move to a system with an upgraded version of SQL Server Reporting Services (SSRS) after deploying reports in a system running Analysis Center 2.6, the **Connection String** in SSRS under the Data Source is removed and not created after either migrating to Analysis Center 2.9, or reinstalling the Data Extension in Analysis Center 2.9.

To view reports in the upgraded version of SQL Server Reporting Services, manually create the **Connection String** in the format: URL=http://*ServerName*/ACWebService, where *ServerName* is the name of the computer on which you have installed the Analysis Center Web Service. For more information, see the Microsoft article [Migrate a Reporting Services Installation \(Native Mode\)](#).

6 Getting Started with Analysis Center

This chapter describes how to begin working with Analysis Center, including which tasks to perform first, how to plan out your reports, and how to generate reports.

- ♦ [Section 6.1, “Getting Started Overview,” on page 49](#)
- ♦ [Section 6.2, “Planning a Report,” on page 50](#)
- ♦ [Section 6.3, “Generating and Deploying a Report: An Overview,” on page 50](#)

6.1 Getting Started Overview

After you install Analysis Center, perform the following Analysis Center tasks to configure Analysis Center and begin generating reports.

- 1 **Implement security.** The security settings you make define what is visible to each user who logs on to the Console, and what Console functionality is available to each user. For more information, see [Chapter 8, “Configuring Security,” on page 63](#).

In addition, Analysis Center provides a utility that allows you to add new Analysis Center licenses or remove licenses for the product. For more information about this utility, see [Section 8.6, “Managing License Keys,” on page 72](#).

- 2 **Define the report data.** For AppManager reports, add one or more Data Sources.

For more information about adding AppManager Data Sources, see the *NetIQ Analysis Center Management Guide*.

- 3 **Plan your reports.** For more information, see [Section 6.2, “Planning a Report,” on page 50](#).

- 4 **Generate reports.** To generate a report, set the context for the report, generate it, and then view it in the Results pane. The context of a report refers to the computers, data streams, and time frame included in the report. Context may also include such measures as average or minimum. For more information, see [Chapter 9, “Generating Live Reports,” on page 73](#), or for a concise overview, see [Section 6.3, “Generating and Deploying a Report: An Overview,” on page 50](#).

If several reports contain related data that is best interpreted when seen together, you can group those reports on one page with an Analysis Center feature called a “dashboard.” For more information about dashboards, see [Chapter 12, “Using Dashboards,” on page 121](#).

- 5 **Deploy reports.** After you have configured a live report to provide the information you need, you can then deploy that report to SQL Server Reporting Services to have it run periodically on the schedule you choose. Each iteration of the report can be delivered via subscription (by email or written to a file share) to one or more users. For more information about deploying reports, see [Chapter 11, “Deploying Reports to SQL Reporting Services,” on page 115](#).

- 6 **Perform administrative tasks.** Basic Analysis Center housekeeping consists of such tasks as defining holidays, determining the amount of time data is retained in the Data Warehouse, and restoring deleted folders and reports. For more information about administrative tasks, see

[Chapter 13, “Performing Administrative Tasks,” on page 125](#).

6.2 Planning a Report

Before you begin generating and deploying reports, think about why you want to create a report and who will be using it.

- 1 Decide what purpose the report will have. What information do you want the report to show? Have you run the AppManager Knowledge Scripts that will produce the data that you want to reveal in a report?
- 2 In the Navigation pane, look through the sub-folders within the **Reports** folder. Is there already a report that is similar to what you want? Consider the reports in the **Application Specific** folder, as well.
- 3 Look at the Configuration Card to see the report properties. Is this report still a good match? For more information, see [Section 9.10, “Understanding the Configuration Card,” on page 101](#).
- 4 Generate the report to see whether it actually does what you want. Select the report name in the Navigation pane and click the **Execute Report** button. The report is displayed in the Results pane. For more information about setting report properties and contexts, see [Chapter 9, “Generating Live Reports,” on page 73](#).
- 5 If the report does what you want, save it under a new, content-specific title in an appropriate folder. For more information, see [Section 9.8, “Saving, Moving, and Renaming Reports,” on page 99](#).
- 6 If appropriate, deploy the report to SQL Reporting Services for access by other users. For more information, see [Chapter 11, “Deploying Reports to SQL Reporting Services,” on page 115](#).
- 7 If none of the existing reports is suitable, look through the **Templates** folder to find a report that is structured the way you want. Save the report under a new title in an appropriate folder, customize the report to present the data that you need, and then generate the report to check its function.

6.3 Generating and Deploying a Report: An Overview

Analysis Center includes many reports that you can use as-is or alter to suit your needs. These pre-configured reports are located in the various category groups within the **Reports** folder in the Navigation pane. This section describes how to generate and deploy a Performance report. For more information, see [Chapter 9, “Generating Live Reports,” on page 73](#).

- ♦ [Section 6.3.1, “Generating a Performance Report,” on page 50](#)
- ♦ [Section 6.3.2, “Deploying a Report,” on page 51](#)

6.3.1 Generating a Performance Report

The following example illustrates the steps involved in creating a **Performance Data Filtered by KS Over Time** report.

Before generating this report, make sure that your Data Source can supply the data that your report uses. For the following example, you run a series of AppManager NT Knowledge Scripts, setting their parameters to collect data and setting their thresholds abnormally low so as to be assured of data and events that could be used in a report.

- 1 In the Navigation pane, expand **Reports > AppManager > Performance** folder and select **Performance Data Filtered by KS Over Time**.

After you select the report, the Tasks pane displays **Context**, **Tasks**, and **Properties** tabs. Also, if your Data Source contains any data, the Results pane displays a preview of the report.

- 2 If you want to view a detailed description of the report, right-click on the report title and select Configuration Card.

The Overview section contains a description of the functions of the report, 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.

- 3 On the Context tab, select the Knowledge Script context. Use the Knowledge Script context to select the Knowledge Scripts that are generating the data you want included in the report.

In this example, you select the `NT_CpuByProcess` Knowledge Script.

NOTE: For more information about how to select data in the contexts, see [Section 9.1.3, “Using the Multi-State Tree Control,”](#) on page 76.

- 4 Select the Metric context. Use the Metric context options to define the data for your report. In this example, you can view the selections that are related to AppManager Knowledge Script data stream legends.

For this example, in the **Application(s)** list, select **NT**. In the list of metric options, select all of the children of the **% CPU Utilization By Process** metric.

- 5 Select the Measures context. The Measures context options allow you to determine the statistics used in the report. For this example, use the default. The default is Average.
- 6 Select the Time context. Use the Time context to determine the time frame for your report. In this example, select a smaller time frame than the default, which is the Last 28 Days.

In the **Date Range** list, select **Last 7 Days**.

- 7 Click **Execute Report**. The Results pane displays the report.

- 8 After you have finished customizing the report, click **Report > Save Report As** to save with a new title under **Reports > Performance**. Make the new title as explicit as possible — it should tell you exactly what purpose this report has.

After you save the report, the Navigation pane displays the report and the Results pane displays the title.

TIP: To make the functions of the report obvious to users, type a meaningful description in the **Description** field on the Properties tab. Ensure that you accurately describe what is shown in the report and include important parameters such as the date range the report covers, the metric being used, and the computers being included. Although you can see the parameters in the Analysis Center Console, you cannot see the parameters you deploy the report to SQL Server Reporting Services.

6.3.2 Deploying a Report

After you have generated a report, you can then deploy the report to SQL Reporting Services. From Reporting Services, you can schedule the report to run periodically. You can configure SQL Reporting Services 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 SQL Reporting Services.

For more information about deploying reports, see [Chapter 11, “Deploying Reports to SQL Reporting Services,”](#) on page 115.

From the Console, if you delete reports that are already deployed, then Reporting Services may not display such reports correctly.

NOTE: 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.

To deploy a report:

- 1 Make sure that you have configured your report to provide the information you need. Then save and generate the report.
- 2 Click **Deploy Report**.
- 3 In this example, accept the default **Report Server Location** and **Report Server Credentials** information, and then click **Deploy**.
- 4 Access the SQL Server Reporting Services home page by entering the following address in a Web browser:
`http://<name of SRS Server>/Reports`
- 5 Expand **NetIQ > Analysis Center > Performance**.
- 6 Click the report you deployed.

7 Navigating the Analysis Center Console

The Analysis Center Console is the interface through which you administer Analysis Center and generate reports. You can access the Console elements based on the permissions granted to you by an Analysis Center Administrator. Elements for which you do not have permission are not visible.

- ♦ [Section 7.1, “Starting the Console,” on page 53](#)
- ♦ [Section 7.2, “Navigation Pane,” on page 54](#)
- ♦ [Section 7.3, “Results Pane,” on page 59](#)
- ♦ [Section 7.4, “Tasks Pane,” on page 59](#)
- ♦ [Section 7.5, “Working with Report Folders,” on page 59](#)
- ♦ [Section 7.6, “Grouping and Filtering Lists,” on page 60](#)

7.1 Starting the Console

The following steps describe the process of starting the Analysis Center Console.

To start the Analysis Center Console:

- 1 In the **NetIQ > Analysis Center** program folder, click **Analysis Center Console**.
- 2 Provide the necessary information to connect to the Analysis Center Web Service and click **Logon**.

Field	Description
Web Service	Enter the URL of the Analysis Center Web Service using the format <i>http://computer hosting Web Service/Web Service virtual directory</i> . The URL is defined during installation of the Web Service. For more information, see Section 3.3.3, “Installing the Analysis Center Web Service,” on page 36 .
Use Current Windows Authenticated User	Select this option to log on with the Windows account you used to log onto the domain. Clear this option to enable the Login name and Password fields.
Login name	Enter the login name for the account you want to use to connect to the Web Service using the format <i>domain\user name</i> . The first time you start the Console, use an account that is a member of the local Administrators group on the computer where the Web Service is installed. The first time you connect to the Web Service, members of this group are added to the Analysis Center BUILTIN\Administrators group on the Console computer. For more information, see Chapter 8, “Configuring Security,” on page 63 .

Field	Description
Password	Enter the password for the account you want to use to connect to the Web Service.
Don't show again	<p>Select this option to not display the Logon dialog box in the future when:</p> <ul style="list-style-type: none"> ♦ You connect to the same Web Service ♦ You use your current Windows credentials to connect to the Web Service <p>If you start the Console while using a different Windows account, the Console displays this dialog box.</p>

The Web Service uses IIS to validate the credentials you use to log on. IIS evaluates the credentials of the account according to how you configured the Web Service during installation.

If you configured the Web Service to use Windows Integrated Authentication, IIS first attempts to validate the user account by its current credentials. If IIS cannot validate by that method, IIS prompts for a user name and password until you provide valid credentials.

If you configured the Web Service to use Basic Authentication, IIS prompts for a user name and password until you provide valid credentials.

The Analysis Center Console consists primarily of the Navigation pane, the Results pane, and the Tasks pane. You can move the Navigation and Task panes.

7.2 Navigation Pane

The Navigation pane gives you access to the different functional areas of Analysis Center. The contents of the Results and Tasks panes change according to the selection you make in the Navigation pane.

When you click something in the Navigation pane, it takes a few moments for the panes to refresh while the Console queries the Data Warehouse and Configuration database.

The Navigation pane contains the following folders:

- ♦ Analysis Center Home
- ♦ Enterprise
- ♦ Views
- ♦ Reports
- ♦ Templates

This section includes the following sub-sections:

- ♦ [Section 7.2.1, "Analysis Center Home," on page 55](#)
- ♦ [Section 7.2.2, "Enterprise," on page 55](#)
- ♦ [Section 7.2.3, "Views," on page 58](#)
- ♦ [Section 7.2.4, "Reports," on page 58](#)
- ♦ [Section 7.2.5, "Viewing Application-Specific Reports," on page 58](#)

7.2.1 Analysis Center Home

The **Analysis Center Home** page allows you to manage or access Security, Data Sources, and Reports.

Each link has an icon that indicates the configuration status of that particular item. For example, if you have not added at least one Data Source, the icon for the Data Sources link is yellow.

If you click the Manage Security link, the Manage Security dialog box opens. For more information, see [Chapter 8, “Configuring Security,” on page 63](#).

If you click the Manage Data Sources link, the Data Sources list is displayed in the Results pane. For more information, see the *NetIQ Analysis Center Management Guide*.

If you click the View Reports link, the Console displays the Reports folder. Expand the Reports folder to see available reports.

7.2.2 Enterprise

The Enterprise folder contains the following:

- ♦ The Active Data Sources folder allows you to see all the currently active Data Sources you have defined. For more information about adding AppManager Data Sources, see the *NetIQ Analysis Center Management Guide*.
- ♦ Database Connections folder allows you to see or modify all of your external Database Connections.

The default Analysis Center connection, *ACOLAP*, is the connection to the OLAP database. If you are an Administrator, you can change the Server Name and OLAP Catalog values of this connection. However, do not modify the connection properties unless you have been instructed to do so by NetIQ Technical Support.

To move or change the OLAP server, use the Properties dialog box to change the values of this connection. Right-click the connection and select **Properties**. You cannot delete this connection.

- ♦ The Deleted Data Sources folder allows you to see all the Data Sources you have deleted.
- ♦ The Pending Data Sources folder allows you to see any added Data Sources that have not yet been activated.

When you select the Enterprise folder, the Results pane displays the following objects:

- ♦ Green for OK
- ♦ Yellow for Warning
- ♦ Red for Critical Condition

These objects indicate the overall health of your Data Sources, Data Marts, Data Warehouse, and Report Server. This allows you to identify potential problems in your Analysis Center environment.

Data Sources

The health of your Data Sources is determined by the success or failure of the most recent ETL job that has run for each Data Source. If any of those jobs has failed, then the overall health of your Data Sources is considered as compromised.

When you select Data Sources, a list of Data Sources is displayed in the lower part of the Results pane. In the upper part of the Results pane, a Status icon, either green, red, or blue, indicating the overall health of your Data Sources is displayed. Green indicates success, red indicates failure, and blue indicates an informational message.

The list presents several columns of information:

Column	Contents
Name	Name of the Data Source.
PreCheck	<p>An integer value that indicates:</p> <ul style="list-style-type: none">♦ The type of pre-check mode you selected when creating the Data Source♦ Whether or not you selected to activate the Data Source upon successful completion of the pre-check. <p>The possible integer values are:</p> <ul style="list-style-type: none">♦ 0: No pre-check♦ 10: Basic check; do not activate♦ 11: Basic check; activate <p>For more information about Data Source pre-checking, see “Managing Data Sources” in the NetIQ Analysis Center Management Guide.</p>
Oldest Data	The date of the oldest data copied from the source database.
Newest Data	The date of the most-recent data copied from the source database.
Days collected	The number of days of data copied from the source database.

Data Marts

The health of your Data Marts is determined by the up/down status of the SQL Server and SQL Server Agent services for each Data Mart. If any service is down, then the overall health of your Data Marts is considered compromised.

When you select Data Marts, a related list is displayed in the lower part of the Results pane. In the upper part of the Results pane, a Status icon, either green, red, or blue, indicating the up/down status of the SQL Server service, is displayed.

The list presents four columns of information:

Column	Contents
Server	Name of the Data Mart SQL Server.
Database	The name of the Data Mart database.
Service	The relevant service (SQL Server or SQL Server Agent).

Data Warehouse

The health of your Data Warehouse is determined by the up/down status of the Data Warehouse SQL Server, the SQL Server agent, and Analysis Services, and from the success or failure of the most recent OLAP Processing job. If any service is down or the last OLAP Processing job fails, then the overall health of your Data Warehouse is considered as compromised.

When you select Data Warehouse, a related list is displayed in the lower part of the Results pane. In the upper part of the Results pane, an icon either green, red, or blue, indicating the up/down status of the relevant service, or the success or failure of the last OLAP Processing job is displayed. Green indicates success, red indicates failure, and blue indicates informational message. The list presents three columns of information:

Column	Contents
Server	The name of the Data Warehouse SQL or Analysis Server.
Service	The relevant service (SQL Server, SQL Server Agent, Analysis Services, or AC OLAP Processing Job).

Report Server

The health of your Report Server is determined by the up/down status of SQL Server Report Server and Internet Information Services, and the presence/absence of the Analysis Center Data Extension. If either service is down, or the Data Extension is not present, then the health of your Report Server is considered compromised.

When you select Report Server, a related list is displayed in the lower part of the Results pane. In the upper part of the Results pane, an icon indicating the status of the Report Server component is displayed. The list presents two columns of information:

Column	Contents
Service	A list of Report Server-related components: <ul style="list-style-type: none">♦ Report Server♦ Analysis Center Data Extension for SQL Reporting Services♦ Internet Information Services

If you have installed SQL Reporting Services in a non-default folder, the status icons for the Report Server are red, falsely indicating a critical condition. Use the Reporting Services tab of the Options dialog box to identify the correct location of the Report Server. When you indicate the correct location, the status icons for the Report Server reflect the appropriate condition. For more information, see [Section 13.5, “Setting SQL Server Reporting Services Options,”](#) on page 128.

7.2.3 Views

Select the Views folder to see a list of all AppManager views that have been imported from the various repositories. These views are one method by which data in reports is filtered. When you select Views, the following columns of information are displayed:

Column name	Column contents
Data Source	Data Sources from which data has been imported.
View Name	AppManager views for which data has been imported.
Machine Count	Number of computers or servers in each view.
Permissions	Analysis Center permissions set for each view.

You can print or export the columns of information by right-clicking in the table, and then clicking **Print** or **Export**.

You can export to the following formats:

- ♦ Microsoft Excel Workbook (XLS)
- ♦ Web page (HTML)
- ♦ XML file (XML)
- ♦ Text file (TXT)

7.2.4 Reports

Expand the Reports folder to see a tree view of available reports. When you select the Reports, the Results pane does not display any information.

When you select an individual report in the Reports folder or a subfolder, the Results pane displays the contents of the report based on the default context, or a message that no data was found for the report.

You can right-click a folder under the Reports folder to display the commands to create, rename, delete, or move a folder.

7.2.5 Viewing Application-Specific Reports

Analysis Center supports application-specific reports such as Exchange, SQL Server, VoIP. Analysis Center also allows you to specify security on the application-specific reports. For more information about application-specific reports, see [Section 8.4, "Applying Security to Folders in the Navigation pane," on page 70](#).

To view application-specific reports:

- 1 Log on to the Console computer with an administrator account.
- 2 Start the Analysis Center Console in the **NetIQ > Analysis Center** program folder.
- 3 In the Navigation pane, navigate to the **AppManager > Application Specific** folder.
- 4 In the **Application Specific** folder, expand the application folder to view the reports. For example, to view the VoIP reports, expand the **VoIP** folder. Templates

Expand the Templates folder to see the available report templates in the Navigation pane. When you select the Templates folder, the Results pane does not display any information.

When you select an individual template, either the contents of the report based on the default context are displayed, or a message that no data was found for the report is displayed.

7.3 Results Pane

The Results pane displays information related to the folder you select in the Navigation pane, and the contents of reports.

You can sort and group data in a Report table by the different column heads. For more information, see [Section 7.6, “Grouping and Filtering Lists,” on page 60](#). When you sort table data, you also sort the corresponding chart, unless the X axis of the chart is ordered by Date/Time. In this circumstance, the chart is not sorted.

7.4 Tasks Pane

The contents of the Tasks pane change depending on what you select in the Navigation pane. When you select one of the top-level folders (such as Analysis Center Home or Enterprise), the Tasks pane contains a list of tasks appropriate to that selection.

When you select an individual report, the Tasks pane contains the Context (data) controls for the report, a list of report-related Tasks, and the Properties controls for the report. You can expand and collapse the individual controls of the Tasks pane by clicking the zoom box for each control.

By default, each control is pinned in place. Click the pin icon to unpin a control.

- When a control is unpinned, it is not displayed in the Tasks pane when not in use.
- To display an unpinned control, point to its tab along the right side of the Tasks pane.
- To close a control, click **Close**.
- To restore a control, select it from the **View** menu.

7.5 Working with Report Folders

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

NetIQ Corporation recommends 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 as you need, until you are done making all of the context changes necessary to produce a report that is exactly what you want. With a temporary folder, you can save a report that is not quite finished, come back to it later, and not have to wonder where you saved it. When you have finished the report, you can save it in the permanent folder in which it belongs.

- [Section 7.5.1, “Creating a Folder,” on page 60](#)
- [Section 7.5.2, “Moving a Folder,” on page 60](#)

7.5.1 Creating a Folder

In the Reports folder, you can create new folders.

To create a new folder:

- 1 Right-click the Reports folder or any subfolder, then select **New Folder**. The New Folder dialog box is displayed with the new folder name highlighted.
- 2 Enter a name for the new folder and then press **Enter**.

The Navigation pane displays the folder with the name you entered, as a child of the folder where you created it.

7.5.2 Moving a Folder

In the Reports folder, you can move the existing folders.

To move a folder:

- 1 Right-click the folder and select **Move Folder**.
- 2 Drag the folder to its new location in the Navigation pane.
- 3 Click **Close**.

7.6 Grouping and Filtering Lists

The lists of information that are displayed in the Results pane can be grouped according to hierarchy. You can expand columns to automatically accommodate all the text in each cell, and you can rearrange columns by dragging. You can also filter a list by a number of different methods.

- [Section 7.6.1, "Grouping a List," on page 60](#)
- [Section 7.6.2, "Manipulating Columns," on page 60](#)
- [Section 7.6.3, "Filtering Lists," on page 61](#)

7.6.1 Grouping a List

You can create a hierarchical grouping of information in a list by dragging column heads to the grouping area at the top of the list. An ungrouped list is displayed by default.

To group the information in the list by one or more column heads, simply drag the column heads into the grouping area. Each successive column head that you drag is added as a child of the previous column head.

To clear the grouping, right-click in the grouping area and select **Clear Grouping**.

To completely expand each item in the list, right-click in the grouping area and select **Full Expand**.

To completely collapse each item in the list, right-click in the grouping area and select **Full Collapse**.

7.6.2 Manipulating Columns

The different lists in the Results pane may not, by default, display all the text in individual columns.

You can expand individual columns to display all the text.

To expand a column:

Right-click the column head and select **Best Fit**.

You can also expand all columns in the list.

To expand all columns:

Right-click a column head and select **Best Fit (all columns)**.

You can rearrange the sequence of columns by dragging the columns from one position in the list to another.

7.6.3 Filtering Lists

You can filter a list by the row contents of a particular column.

To filter a list:

- 1 Click the drop-down arrow for the column you want to use to create the filter.
- 2 Select the method by which you want to filter.

Filter	Description
All	All rows are displayed.
Custom	All rows where this column matches the equation you define. For example: Job name = X or elapsed time is less than X The custom operators like and not like are used with wild cards. For example, like *ETL displays all rows where the column contains <i><anything></i> ETL.
Blanks	All rows for which this column contains a blank cell.
Non blanks	All rows for which this column does not contain blank cells.
<cell content>	All rows for which this column contains this specific cell content.

NOTE: When you group or filter the data in a table (or sort a column by clicking the column head), the corresponding chart is updated to reflect those changes. Those changes can be saved with the report, with one exception: if the X axis of a chart is Date/Time (for example, values distributed along a time line from January 1 to January 21), no grouping or sorting of the table columns is reflected in the chart, and no grouping or sorting of columns is saved with the report (columns are always sorted by Date/Time ascending).

8 Configuring Security

After you have installed Analysis Center and familiarized yourself with the Console, your next step is to implement security. The security settings you make define what is visible to each user who logs on to the Console, and what Console functionality is available to each user.

You configure Security by creating accounts, assigning those accounts to groups, creating permission sets, and then assigning groups and permission sets to folders in the Navigation pane.

Each time a user connects to the Web Service, Analysis Center makes an evaluation of the Windows user groups on the Web Service computer and the groups defined within Analysis Center. In any case where there are matching group names, the Windows user is added to the corresponding Analysis Center group.

For example, if the connecting user is a member of the Windows group *Administrators*, then that user is added to the AC_Configuration database as an Analysis Center user with administrative permissions (full permissions for Analysis Center), and is added to the Analysis Center group BUILTIN\Administrators. If the connecting user is a member of the Windows group *Users*, then that user is added to the AC_Configuration database as a non-administrative Analysis Center user, and is added to the Analysis Center group BUILTIN\Users.

Analysis Center has three default groups defined:

- ♦ BUILTIN\Administrators (full permissions for Analysis Center)
- ♦ BUILTIN\Users
- ♦ Analysis Center Everyone (all Analysis Center users belong to this group; this group is not exposed)

NOTE: The account you use to install Analysis Center is added as an administrative account with full permissions.

The automatic addition of Windows users to Analysis Center groups works for the three default Analysis Center groups. If you want to create additional local Windows groups and matching Analysis Center groups to take advantage of the automatic addition of users, you must use the following naming convention for the Analysis Center groups:

<Web Service computer name>\<Windows group name>

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- ♦ [Section 8.1, “Understanding the Manage Security Window,” on page 64](#)
 - ♦ [Section 8.2, “Applying Security,” on page 64](#)
 - ♦ [Section 8.3, “Working with Accounts, Groups, and Permission Sets,” on page 64](#)
 - ♦ [Section 8.4, “Applying Security to Folders in the Navigation pane,” on page 70](#)
 - ♦ [Section 8.5, “Understanding the Impact of Your Security Settings,” on page 71](#)
 - ♦ [Section 8.6, “Managing License Keys,” on page 72](#)

8.1 Understanding the Manage Security Window

To open the Manage Security dialog box, click **File > Manage Security** or click the Manage Security Icon on the toolbar. The Manage Security dialog box allows you to:

- ♦ Add Windows accounts to Analysis Center, give Analysis Center Administrative permissions to individual accounts, and enable or disable accounts.
- ♦ Create groups of Analysis Center users, add Windows users to those groups, give Analysis Center Administrative permissions to individual groups, and enable or disable groups.
- ♦ Create permission sets that are more restrictive than Administrative permissions, and enable or disable those permission sets.
- ♦ The enable/disable feature lets you fully organize your security paradigm before you implement it. It also allows you to enable/disable individual users, groups, or permission sets whenever it might be necessary during the ongoing administration of Analysis Center security.

8.2 Applying Security

Security for Analysis Center is *applied* to folders in the Navigation pane. For each folder, you can define which groups have permissions, and which permission set is enforced for each group on that folder.

For example, you may want to restrict access to the Enterprise folder to an administrative group with permissions to create Data Sources, while giving broader access to various folder under Reports.

8.3 Working with Accounts, Groups, and Permission Sets

The order in which you create accounts, groups, and permission sets is not important, although you add accounts to groups at some point to give those users access to Analysis Center functionality.

- ♦ [Section 8.3.1, “Creating and Managing Accounts,” on page 64](#)
- ♦ [Section 8.3.2, “Working with Account Groups,” on page 66](#)
- ♦ [Section 8.3.3, “Using Windows Groups,” on page 67](#)
- ♦ [Section 8.3.4, “Working with Permission Sets,” on page 67](#)

8.3.1 Creating and Managing Accounts

To have Analysis Center group members, you need to first create Analysis Center user accounts.

NOTE: You can enter account names in multiple formats: username, machinename\username, domainname\username, etc. And you are allowed to add accounts with the same name provided you use different formats: joe, machine1\joe, machine2\joe. But you should not do this. If you do, the Analysis Center privileges of the accounts will be restricted to the privileges of the account that has the least privileges.

Creating a User Account

You can create a User Account, and modify or remove the account.

To create a user account:

- 1 Click **File > Manage Security**.
- 2 Click the **Accounts** icon and then click **Add**.
- 3 Complete the Add New Account dialog box as instructed below:

Field	Description
Name	Type the account name. If you are entering a domain account, use the format <i>domain\user name</i> If you are entering a local account, use the format <i>computer name\user name</i>
Description	Type the description you want for the account.
Administrator	Select Administrator to give this account all permissions for Analysis Center.
Enabled	Select Enabled to enable the account. By default, the account is enabled. An enabled account has access to Analysis Center. That access depends on whether the account is granted Administrative permissions, which enabled groups the account belongs to, and which permission sets are associated with each of those groups when they are assigned to folders in the tree view. An account that is not enabled is ignored by Analysis Center.

- 4 Click **Create**. The new account is displayed in the Manage Security dialog box.
- 5 Click **Close**.

To modify an account:

- 1 Click **File > Manage Security**.
- 2 Click the **Accounts** icon.
- 3 Select an account and then click **Modify**.
- 4 Make the necessary modifications to the **Name** and **Description** fields, and to the **Administrator** and **Enabled** options.
- 5 Click **Modify** and then click **Close**.

To remove an account:

- 1 Click **File > Manage Security**.
- 2 Click the **Accounts** icon.
- 3 Select an account and then click **Remove**.
- 4 Click **Close**.

8.3.2 Working with Account Groups

Account groups are one aspect of how security is applied to folders in the tree view; permission sets are the other aspect. To apply security, you must identify the groups that have access to a folder and which permission set applies to each group.

Group members are selected from the accounts you create for Analysis Center. For more information about accounts, see [Section 8.3.1, “Creating and Managing Accounts,” on page 64](#).

To create an account group:

- 1 Click **File > Manage Security**.
- 2 Click the **Groups** icon and then click **Add**.
- 3 Complete the **Add New Group** dialog box as instructed below:

Field	Description
Name	Type a name for the group.
Description	Type the description you want for the group.
Administrator	Select Administrator to give this group all permissions for Analysis Center. A group that has this option selected cannot be deleted.
Enabled	Select Enabled to enable the group. An enabled group is recognized by Analysis Center. The permissions associated with the group are enforced for each folder to which the group is assigned. If a group is not enabled, it is ignored by Analysis Center.
Accounts	Click Add to open the Browse Accounts dialog box. Select accounts from the list, then click Add . The selected accounts are added to the User Name list. Select an account from the User Name list and click Remove to remove the account from the group. NOTE: An account can belong to multiple groups. In this case, the most-restrictive set of permissions in effect takes precedence.

- 4 Click **Create**. The new group is displayed in the Manage Security dialog box.
- 5 Click **Close**.

To modify an account group:

- 1 Click **File > Manage Security**.
- 2 Click the **Groups** icon.
- 3 Select a group and then click **Modify**.
- 4 Make the necessary modifications to the Name and Description fields, to the Administrator and Enabled options, and to the Name list.
- 5 Click **Modify** and then click **Close**.

To copy an account group:

- 1 Click **File > Manage Security**.
- 2 Click the **Groups** icon.

- 3 Select a group and then click **Copy**.
- 4 You cannot copy a group that has the *Administrator* option selected.
- 5 Make the necessary modifications to the **Name** and **Description** fields, to the **Administrator** and **Enabled** options, and to the **Name** list.
- 6 Click **Copy** and then click **Close**.

To remove an account group:

- 1 Click **File > Manage Security**.
- 2 Click the **Groups** icon.
- 3 Select a group and then click **Remove**.
- 4 Click **Close**.

NOTE: You cannot remove a group that has the *Administrator* option selected.

8.3.3 Using Windows Groups

After your initial login to Analysis Center, you can create additional corresponding Windows and Analysis Center groups, and configure Analysis Center to add Windows users to those Analysis Center groups. When a user logs on to the Console, Analysis Center checks local user groups on the Web Service computer to see whether there are matches to Analysis Center groups. If it finds a match, Analysis Center adds the Windows users to the Analysis Center groups of the same name. The Analysis Center groups must use the following naming convention for this process to work:

<Web Service computer name>\<Windows group name>

If you remove a member from a Windows group on the Web Service computer, that account can no longer be used to gain access to Analysis Center, but the account will remain in Analysis Center until you have removed it through the Manage Security dialog. For more information about removing an account, see [Section 8.3.1, “Creating and Managing Accounts,” on page 64](#).

8.3.4 Working with Permission Sets

Granting Administrative permissions to individual users or groups grants full Analysis Center permissions. You can define more restricted sets of permissions and enforce more granular security for each folder in the tree view.

You can use the following permissions:

Category	Permission
Administration	Assign security rules to a folder
Data Source	Add a Data Source
	Modify a Data Source
	Remove a Data Source

Category	Permission
Folder	Create a new folder
	Delete a folder
	Move a folder
	Rename a folder
Node	View a node
Report	Delete a report
	Deploy a report
	Execute a report
	Export a report
	Move a report
	Print a report
	Rename a report
	Save a report
	Save a report as

Analysis Center has a number of configured permission sets you can use as is, or as the basis for your own custom sets.

A permission can have one of three states:

- ♦ **Undefined**, which means neither an allow or deny state has been assigned to the permission.
- ♦ **Allow**, which means the permission is granted.
- ♦ **Deny**, which means the permission is denied.

To create a permission set:

- 1 Click **File > Manage Security**.
- 2 Click the **Permissions** icon and then click **Add**. The Add New Permission Set dialog box is displayed.

3 Complete the fields in the dialog box as instructed below:

Field	Description
Name	Type a name you create to identify the permission set.
Description	Type the description you want for the permission set.
Enabled	Select Enabled to enable the permission set. An enabled permission set is recognized by Analysis Center. The permissions defined by the set are enforced for each folder to which the set is assigned. If a permission set is not enabled, it is ignored by Analysis Center.
Permissions	Set the state for each permission as undefined, allow, or deny. Click once to change the state from undefined to allow; click again to change from allow to deny. The icon indicating the permission state changes with each click.

If you set the permission state at the category (folder) level, then each individual permission inherits that state.

You can set a different state for each permission in a category.

4 After you have set the state for each permission, click **Create**. The new permission set is displayed in the Manage Security dialog box.

5 Click **Close**.

To modify a permission set:

1 Click **File > Manage Security**.

2 Click the **Permissions** icon.

3 Select a permission set and then click **Modify**.

4 Make the necessary modifications to the **Name** and **Description** fields, to the **Enabled** option, and to the permission states.

5 Click **Modify** and then click **Close**.

To copy a permission set:

1 Click **File > Manage Security**.

2 Click the **Permissions** icon.

3 Select a permission set and then click **Copy**. The Copy dialog box is displayed.

4 Complete the fields in the dialog box as instructed below:

Field	Description
Name	Type a name for the copy of the permission set.
Description	Type the description you want for the new permission set.

Field	Description
Enabled	<p>Select Enabled to enable the permission set.</p> <p>An enabled permission set is recognized by Analysis Center. The permissions defined by the set are enforced for each object to which the set is assigned.</p> <p>If a permission set is not enabled, it is ignored by Analysis Center.</p>
Permissions	<p>Set the state for each permission as undefined, allow, or deny.</p> <p>Click once to change the state from undefined to allow; click again to change from allow to deny. The icon indicating the permission state changes with each click.</p>

5 Click **Create**. The new permission set is displayed in the Manage Security dialog box.

6 Click **Close**.

To remove a permission set:

- 1 Click **File > Manage Security**.
- 2 Click the **Permissions** icon.
- 3 Select a permission set and then click **Remove**.
- 4 Click **Close**.

8.4 Applying Security to Folders in the Navigation pane

After you have set up users, groups, and permission sets, your next step is to apply security to the folders in the Navigation pane.

Permissions are calculated cumulatively for the folders in a hierarchy, with the most-restrictive permissions taking precedence from that folder to its subfolders.

The following illustration is an example: if a group has permission to view the `Reports` and `Application Specific` folders, and is denied permission to view the `Exchange` folder, then that group does not have access to the `Exchange` reports (the folder is not displayed for that group), but does have access to the `SQL Server` reports.

If a group has permission to view the `Reports` folder, and is denied permission to view the `Application Specific` folder, then that group does not have access to either the `Exchange` or `SQL Server` reports (those folders are not displayed for that group).

When you are denied permission to view a folder, that folder is not displayed when you log in to the Console.

If permissions for a folder are undefined, that folder inherits the permissions of its immediate parent.

To apply security to a folder:

- 1 Right-click the folder in the Navigation pane and select **Security**.
- 2 Click **Add**.

- 3 Complete the dialog box as instructed below:

Field	Description
Group	Select an account group from the list.
Permission Set	Select a permission set from the list. This permission set is enforced for the group you select.

- 4 Click **Add**. The new information is displayed in the Security dialog box.

NOTE: You can add multiple account groups. You can also add the same group multiple times with different permission sets. 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.

- 5 Click **OK**.

8.5 Understanding the Impact of Your Security Settings

The security settings for folders affect the range of functionality available to different users. This section discusses the impact of security settings for the following default folders:

- ♦ [Section 8.5.1, “Analysis Center Home,” on page 71](#)
- ♦ [Section 8.5.2, “Enterprise,” on page 71](#)
- ♦ [Section 8.5.3, “Views,” on page 72](#)
- ♦ [Section 8.5.4, “Reports and Templates,” on page 72](#)

8.5.1 Analysis Center Home

By default, all Analysis Center users have access to Analysis Center. Without access to this folder, you cannot see any of the others.

If you deny access to this folder, you effectively deny access to all Analysis Center functionality.

8.5.2 Enterprise

Access to the Enterprise folder is necessary to see the Enterprise view, which gives an overall look at the health of your Analysis Center environment, and for access to the Data Sources folder.

Access to the Data Sources folder is necessary to add and modify Data Sources.

8.5.3 Views

Access to the Views folder is necessary to have access to the various AppManager views that have been imported from each repository. Access to views is required to be able to select computers for a report when you set the context. For more information about views, see [Section 9.1.5, “Setting the Group Context,” on page 77](#).

If you are denied access to the Views folder, the report cannot be displayed as you cannot select computers for a report, and there is no data found for the report. You can set permissions for individual views under the Views folder. For example, you can limit some users to selecting computers from only the SQL or Exchange views.

8.5.4 Reports and Templates

Access to the Reports and Templates folders is necessary to select and generate reports.

You can set permissions for individual folders of reports, or for individual reports, to control user access.

8.6 Managing License Keys

Use of Analysis Center requires that you purchase licenses for each NetIQ product:

For AppManager, you need a license for each managed clients. For example, if you use two AppManager Data Sources, each reporting on 500 servers, you need Analysis Center licenses for 1000 managed clients.

The cost of a license is based on how long the license lasts and on the number of servers at your site that are providing data to Analysis Center. Use a utility on the Help menu to add or remove licenses. The Manage Licenses window displays your subscription information. For more information, see [Section 2.8, “Analysis Center License Monitoring,” on page 31](#).

To add a new license or remove an expired license, click **Help > Manage Licenses** to start the license management utility.

- ♦ To add a new license key, type the license key in the **New license key** field and click **Add**.
- ♦ To remove an existing key, select the key in the top pane and click **Remove**.

A trial license key is installed with the Analysis Center Console. It enables full functionality for a limited time. This trial key is displayed in the Manage Licenses dialog with the expiration date. Reinstalling Analysis Center will not extend the trial period.

9 Generating Live Reports

After you have defined at least one Data Source and enough time has elapsed that the ETL and OLAP processing jobs have both successfully completed, you can generate reports based on that data. For running a report successfully, the OLAP processing job has to process the context members in the dimensions of the OLAP database.

Analysis Center support VoIP reports. For more information, see [Section 7.2.4, “Reports,” on page 58](#).

There are two types of reports you can run:

- ♦ **Live**, or ad hoc, reports. For a live report, you set the context for the report, run the report, and then view the contents of the report in the Analysis Center Console.

When you run a live report, that data is cached until you run the report again. If you select a report that has been created, you see the cached data. To see more-recent data, run the report again.

- ♦ **Deployed**, or scheduled, reports. To generate reports on a schedule, you configure the report to display the data in which you are interested (the same way you configure a live report), and then deploy the report to SQL Server Reporting Services. The scheduling and distribution of the report is handled from the SQL Reporting Services interface. For more information, see [Chapter 11, “Deploying Reports to SQL Reporting Services,” on page 115](#).

Analysis Center provides you the Report Wizard to generate reports quickly. For more information, see [Section 9.12, “Understanding Report Wizard,” on page 105](#).

This chapter includes the following sections:

- ♦ [Section 9.1, “Setting the Context for a Report,” on page 74](#)
- ♦ [Section 9.2, “Understanding AppManager Control Center Management Groups,” on page 84](#)
- ♦ [Section 9.3, “Setting Report Properties,” on page 85](#)
- ♦ [Section 9.4, “Using the Chart Toolbar,” on page 95](#)
- ♦ [Section 9.5, “Making Easily Read Charts,” on page 96](#)
- ♦ [Section 9.6, “Using Multiple Y Axes in a Chart,” on page 98](#)
- ♦ [Section 9.7, “Exporting and Printing Charts and Tables,” on page 99](#)
- ♦ [Section 9.8, “Saving, Moving, and Renaming Reports,” on page 99](#)
- ♦ [Section 9.9, “Linking Reports,” on page 100](#)
- ♦ [Section 9.10, “Understanding the Configuration Card,” on page 101](#)
- ♦ [Section 9.11, “Chart Limitations,” on page 102](#)
- ♦ [Section 9.12, “Understanding Report Wizard,” on page 105](#)

9.1 Setting the Context for a Report

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 first time you select a report, it displays any data relevant to its default context. If there is no relevant data (for example, no data that fits the default time context), then a link to the configuration card for the report is displayed in the Report pane.

NOTE: Depending on the amount of data called for by your context settings, the time required to run a query may exceed the timeout settings in the Web.config file, causing the query to abort. If you are routinely generating reports that contain large data sets, you can alter the timeout settings by editing the Web.config file. For more information, see [Section 13.8.3, “Changing Timeout Values,” on page 134](#).

You can also change the connection timeout settings for the Web Service Web site. For more information, see [Section 13.9, “Adjusting the Connection Timeout for the Web Service Web Site,” on page 135](#).

- [Section 9.1.1, “Displaying the Context Pane,” on page 74](#)
- [Section 9.1.2, “Showing and Hiding Context Buttons,” on page 76](#)
- [Section 9.1.3, “Using the Multi-State Tree Control,” on page 76](#)
- [Section 9.1.4, “Selecting Report Data,” on page 77](#)
- [Section 9.1.5, “Setting the Group Context,” on page 77](#)
- [Section 9.1.6, “Setting the Knowledge Script Context,” on page 78](#)
- [Section 9.1.7, “Setting the Measures Context,” on page 78](#)
- [Section 9.1.8, “Setting the Metric Context,” on page 78](#)
- [Section 9.1.9, “Setting the Time Context,” on page 79](#)
- [Section 9.1.10, “Locking a Context,” on page 83](#)
- [Section 9.1.11, “Refreshing a Context,” on page 84](#)

9.1.1 Displaying the Context Pane

When you first open Analysis Center, the Tasks pane is displayed on the right-hand side of the console with a Context tab and Properties tab displayed at the bottom of that pane. Click the Context tab to display the Context pane.

When you select a report in the Navigation pane, its context controls are available on the **Context** pane.

There are six different context controls you can use with a report, but not every context control is available for every report.

Context Control	Purpose
Data Source/Database Connection	Lets you select specific sources of data for your report. Data Sources apply to AppManager reports. By default, if you have added more than one Data Source, reports reflect all of them, but many reports allow you to exclude Data Sources.

Context Control	Purpose
Group	Lets you select computers for a report. You can select computers individually or by group.
Knowledge Script	<p>Lets you filter the contents of an AppManager report by Knowledge Script. You can see only the Knowledge Scripts that are available both in the Cube and the Warehouse.</p> <p>For example, if you are running an event report, you can limit the contents of the report to events raised by a particular Knowledge Script (or group of Knowledge Scripts).</p> <p>You can also use this control in conjunction with the Metric context control when it is available.</p> <p>For example, if you are using both the <i>General_Counter</i> and <i>NT_LogicalDiskSpace</i> Knowledge Scripts to monitor the percentage of free disk space, you can select both Knowledge Scripts, and the comparable metrics returned by each Knowledge Script, and use the report to compare the values.</p> <p>NOTE: Keep in mind that if the Knowledge Script and Metric context settings are in conflict with one another, your report will have no data. For example, if you set the Knowledge Script context to <i>NT_CpuLoaded</i>, but set the Metric context to a data stream collected by a different Knowledge Script (such as <i>% Physical Memory Usage</i>, which is collected by <i>NT_MemUtil</i>), your report will be empty. If you do not want to invoke any filtering by Knowledge Script, use the default selection of <i>All Knowledge Scripts</i>.</p>
Measures	<p>For AppManager reports, lets you select which statistics to compute for the data:</p> <ul style="list-style-type: none"> ♦ Average ♦ Count ♦ Maximum ♦ Minimum ♦ Standard Deviation ♦ Sum
Metric	<p>Lets you select the data for an AppManager report. You can see only the Metric that are available in Cube.</p> <p>Each data stream is identified by a string (for example, <i>% Physical Memory Usage</i>). Generally, there are multiple instances of a data stream (for example, <i>% Physical Memory Usage</i> from each of your Web servers).</p>
Time	<p>Lets you select the time range for a report.</p> <p>Some AppManager reports have two Time context controls, allowing you to compare the same type of data over different time periods (for example, the number of HTTP requests to a Web site over the past year compared to the past month).</p> <p>When you are comparing data in two different time periods, the filters set for that comparison must be the same; therefore, you can set the filter data on the first time context only. Subsequent time contexts will have the filter options greyed out.</p>

To display a context control, click its name at the bottom of the Context pane. Only one control can be displayed at a time.

9.1.2 Showing and Hiding Context Buttons

It is possible to remove context buttons that you do not need for your report to make your list of contexts more manageable. The context list is saved with the report. Although the contexts may be removed from your view, they are not removed from the report. So be aware of how a context is set, before you remove it from your view. Default values for a context will not affect your report, but if you have a filter set on a context, it will affect your report whether it is hidden or not.

You can also minimize the context buttons to provide more space to view the information associated with a context.

To remove the context buttons that you do not need:

- 1 Click the arrow at the bottom of the Context pane. Then, click **Add or Remove Buttons**.
The list of possible buttons displays.
- 2 Click the button that you want to add or remove. If the button you click on exists as part of your report, it is removed. If the button has already been removed, it will be added again.

To show or hide existing buttons:

After you have decided which buttons you want to include with your report, you can easily minimize buttons to make the list temporarily shorter. This is useful when the context you are displaying has a lot of information associated with it and you want to see as much as you can.

To minimize or maximize a context button, click the arrow at the bottom of the Context pane and select either **Show Fewer Buttons** or **Show More Buttons**.

When a button is minimized, an icon is displayed at the bottom of the Context pane.

9.1.3 Using the Multi-State Tree Control

The contexts use a multi-state tree control that lets you make a variety of different selections to create different orientations of the data. For example, you can compare the average memory use of individual SQL Servers to the average for all SQL Servers, or you can compare aggregate values by region.

The capability to make different types of selections from different levels of the tree view provides a great deal of flexibility in how you present data in a report (for example, comparing individual servers to one another, comparing individuals to a group, or comparing groups).

The default selection for a context is the top folder in the context control. For example, in the Group context control, the default selection is the All Machines folder; in the Measures context control, the default selection is the Average folder. If you do not make a selection for a context, the contents of the report will reflect this default selection.

Six different states of selection apply to a folder in the tree; one of the states applies only to the Group context.

You click a folder once to explicitly select just that folder, click again to deselect the folder and select each of its immediate children by rule, then click a third time to deselect the folder and all of its subfolders.

Icons for the other selection states are displayed for parent nodes based on the selection states of their children.

State 1: The parent folder is not selected, and none of its children is selected.

If nothing in the tree is selected, then a value is returned for the first item in the tree, in this case, All Machines.

State 2: The parent folder is explicitly selected; none of its children (if it has any) is selected.

In this case, the Locations folder is selected. Only values for the Locations folder are returned.

State 3: The parent folder is not selected, but one or more of its children are selected.

In this case, the Locations folder is not selected, but each of its immediate children is. Values are returned for each immediate child folder (Bellevue and Houston).

This selection icon is displayed under two circumstances:

- ♦ First, when you click an explicitly selected folder. In this case, the folder becomes deselected and the immediate children become selected by rule.
- ♦ Second, when you explicitly select any child of the parent folder.

State 4: The child folder is selected by rule; none of its children is selected.

To select a folder by rule means to select the child folder by double-clicking on the parent folder. When you select a child folder in this manner, you cannot change the selection of the child, or that of its children by clicking directly on their nodes. You must click again on the parent folder to change the child's selection.

With this selection option, your report will display data only for the child objects that are selected by rule.

In this case, the Bellevue and Houston nodes are selected by rule (by clicking the Locations folder twice). A value is returned for each folder that is selected by rule.

NOTE: State 4 applies only to the Group context.

State 5: The folder is explicitly selected, and one or more of its children are selected (by any method).

In this case, the Bellevue folder is explicitly selected, and the Bellevue01 folder is explicitly selected. A value is returned for the Bellevue folder and for the Bellevue01 folder.

9.1.4 Selecting Report Data

The Data Source context lets you select which Data Sources you want to use for an AppManager report. By default, AppManager reports reflect all Data Sources.

Use the tree control to select the Data Source(s) or Database Connection to report on.

9.1.5 Setting the Group Context

The Group context allows you to select individual servers, groups of servers, or server instances to be included in a report.

When you select an AppManager report, a **View** menu at the top of the Group context control lists the views from the various AppManager repositories from which you want to import data.

To set the Group context:

- 1 For AppManager reports, select a view to display the servers in that view.
If there is more than one instance of a view among the various AppManager repositories (for example, IIS or NT), then all servers from all instances of that view are displayed.

The Master view may contain other server groups.

- 2 Select **Show Instances** if you want to list server instances (for example, SQL Server instances) in the tree control.

9.1.6 Setting the Knowledge Script Context

The Knowledge Script context lets you filter the data in an AppManager report by Knowledge Script.

Use the tree control to select the individual Knowledge Scripts or groups of Knowledge Scripts whose data you want for your report.

9.1.7 Setting the Measures Context

The Measures context lets you calculate statistics from the data in an AppManager report. Use the tree control to select the measures in which you are interested.

Depending on the report, you can select one or more of the following measures. In this context, the tree control employs only two selection states: Selected and Not Selected.

If you do not select a measure, Analysis Center calculates an average value by default.

Average

Average of data point values within the selected date range (aggregate sum divided by aggregate count).

Count

Number of data points collected by a data stream/legend within the selected date range.

Maximum

Highest number (value) of all collected data points within the selected date range.

Minimum

Lowest number (value) of all collected data points within the selected date range.

Standard Deviation

Value that indicates how tightly a set of values is clustered around the average of those same values (square root of the product).

$$[\left(\frac{\text{SumOfSquares} - (\text{Sum} * \text{Sum} / \text{Count})}{\text{Count} - 1}\right)]$$

Sum

Total of all collected data point values within the selected date range.

9.1.8 Setting the Metric Context

The Metric context lets you select the data for an AppManager report. You can filter your selections by application and by metric type. If you select too many data streams for a report, the chart may become unreadable.

In the reports or the charts, Analysis Center does not display metrics for which the data is empty and does not display computers for which data does not exist. For the Reports by Over Time, Analysis Center does not display dates when data does not exist only for the grid.

NOTE: Analysis Center does not support the Hide Empty Metrics feature for the Service Level and Statistical Service Level reports.

For example, if you want to generate a report for the AppManager performance data for NT using the Template-Metric by Machine, and if data does not exist for % **DC Memory Utilization**, then Analysis Center will not display this metrics in the report or on the chart.

If data does not exist for a few days in a specific range using Template-Data Source by Date Time, Analysis center displays the empty values. For example, if you generate a report using the Template-Data Source by Date Time from 5/23/2007 to 6/6/2007, and if data does not exist for a few days in this date range, Analysis Center displays the empty values.

To set the Metric context:

- 1 Use the **Application(s)** list to limit data to specific applications. For example, you can limit your choices to data collected by AppManager from the Windows operating system or from SQL Server.

To select applications, click the drop-down arrow and select from available applications.

- 2 Use the **Metric Type(s)** list to limit data to specific types of data streams (for example, AppManager performance data or AppManager event data).

To select types of metrics, click the drop-down arrow, then select from available types.

- 3 Use the tree control to select the data in which you are interested. You can select a single data stream, or multiple individual data streams or groups of data streams from various levels of the hierarchy.

9.1.9 Setting the Time Context

The Time context lets you specify a time frame for your report. The time context for AppManager reports is OLAP-based. When constructing a custom time context, you are not allowed to set start or end dates that fall outside the timestamps in the data. Where there is a conflict in date ranges, it is resolved in favor of the most restrictive (AppManager) time context.

Some reports include multiple Time context controls, which allow you to compare the same type of data over different periods of time (for example, the processing time required for SQL statements over the past 12 months compared to the last 28 days).

The time range filters are Interval, Start Time, End Time, Days Of Week, US Holidays and UTC. For reports that allow you to specify multiple time ranges, the time range filters are set in the first control and ignored in the other time controls to enforce a comparison of like-types of data.

For example, if the Time control specifies hourly intervals for data collected Monday through Friday, then these filters do not apply to all time ranges covered in the report only for the first one.

Setting the Predefined Date Range

The Time context control lets you set a custom time range, or choose from a number of predefined time ranges. The following table lists the predefined date ranges:

Date Range	Time Represented
Last 7 Days	The last seven days. For example, if today is January 7, then the last seven days are January 1 to January 7.

Date Range	Time Represented
Last 12 Months	<p>The previous twelve months.</p> <p>For example, if today is any day in January, 2005, then the previous 12 months are January 1, 2004 to December 31, 2004.</p>
Last 28 Days	<p>The last twenty-eight days.</p> <p>For example, if today is January 28, then the last 28 days are January 1 to January 28.</p>
Last 3 Months	<p>The previous three months.</p> <p>For example, if today is any day in April, then the previous three months are January 1 to March 31.</p>
Last 365 Days	<p>The last 365 days.</p> <p>For example, if today is December 31, 2005, then the last 365 days are January 1, 2005 to December 31, 2005.</p>
Last 4 Quarters	<p>The previous four quarters.</p> <p>The first month of the first quarter is set in Tools > Options > Enterprise Options. For more information, see Section 13.1, "Setting Data Warehouse Properties," on page 125. January is the default month.</p> <p>Using the default setting, if today is January 1, 2005, then the previous four quarters are January 1, 2004 to December 31, 2004.</p>
Last 6 Months	<p>The previous six months.</p> <p>For example, if today is January 1, 2005, then the previous six months are July 1, 2004 to December 31, 2004.</p>
Last 90 Days	<p>The last 90 days.</p> <p>For example, if today is December 31, then the last 90 days are October 3 to December 31.</p>
Last Month	<p>The previous month.</p> <p>For example, if today is any day in February, then the previous month is January 1 to January 31.</p>
Last N Days	<p>The previous N days.</p> <p>The Date Range sets the base time as the day on which the report is run and counts back N days from the base time.</p> <p>For example, if you select N Value as 2 and if today is July 26, 2007, then Analysis Center generates a report for the date range, 7/25/2007 to 7/26/2007.</p>
Last N Months	<p>The previous N months.</p> <p>For example, if you select N Value as 5 and if the current month is July, then Analysis Center generates a report for the date range, 2/1/2007 to 6/30/2007.</p>
Last N Weeks	<p>The previous N weeks.</p> <p>For example, if you select N Value as 2 and if today is August 16, 2007, then Analysis Center generates a report for the date range, 7/29/2007 to 08/11/2007.</p>

Date Range	Time Represented
Last Quarter	The previous quarter. Using the default setting of January as the first month of the first quarter, if today is any day in April, then the previous quarter is January 1 to March 31.
Last Week	The previous week (Sunday to Saturday).
Last Year	The previous year. For example, if today is any day in 2005, then last year is January 1, 2004 to December 31, 2004.
This Month	All days in the current month. For example, if today is January 15, then this month is January 1 to January 31.
This Quarter	All days in the current quarter. Using the default setting of January as the first month of the first quarter, if today is February 15, then this quarter is January 1 to March 31.
Today	12:00 AM to 11:45 PM of the current day.
Yesterday	12:00 AM to 11:45 PM of the previous day.

You can select a value for N in the Last N Days, Last N Months, and Last N Weeks custom date range options.

To set a value for N:

- 1 In the Navigation pane, click **Reports**.
- 2 From the reports folders, select a report for which you want to modify the report properties.
- 3 In the Context tab, select **Time**.
- 4 From the **Date Range** list, select **Last N Days**, **Last N Months** or **Last N Weeks**.
- 5 From the **N Value** list, select a value for N. By default, the range of values for N is from **2** to **21**.

Setting the Custom Date Ranges

You can select a start date and an end date for which you want Analysis Center to generate reports. The following table lists the custom date range:

Date Range	Time Represented
Custom Range	The specified date range. For example, you can select Start Date as 7/23/2007 , End Date as 7/26/2007 to generate a report. For more information, see “Setting the Custom Date Ranges” on page 81 .

To set the Custom Range option:

- 1 In the Navigation pane, click **Reports**.
- 2 From the reports folders, select a report for which you want to modify the report properties.

- 3 In the Context tab, select **Time**.
- 4 From the **Date Range** list, select **Custom Range**. When you select **Custom Range**, Analysis Center displays the **Start Date** and **End Date** controls.

Selecting an Interval

You can select the interval at which data is aggregated in your report. For example, if your time range is 12 months, you may want to aggregate data by month rather than day, while a time range of seven days might be more appropriately aggregated by day.

Select an interval from the **Interval** list.

Selecting a Start and End Time

You can limit the contents of your report to specific hours of the day. For example, if you are interested primarily in the level of message traffic on your Exchange Servers during regular working hours, you can limit the contents of the report to data collected between 8:00 AM and 6:00 PM.

To set a start and end time:

- 1 Click the arrow on the **Start Time** list to display the Hour/Minute control.
Hours are listed on the left side of the control. You can select from 00 (Midnight) to 23 (11:00 PM).
Minutes are listed on the right side of the control. You can select from quarter-hour increments (00 to 45).
- 2 Select an hour.
- 3 Select a minute increment.
- 4 Click outside the control to apply your selections.
- 5 Click the arrow on the **End Time** list to display the Hour/Minute control.
- 6 Repeat steps 2 through 4.

Selecting Days of the Week

You can limit the contents of your report to specific days of the week. For example, if you are interested primarily in the level of message traffic on your Exchange Servers during regular working days, you can limit the contents of the report to data collected from Monday to Friday.

To select specific weekdays for your report:

- 1 Click the arrow on the **Days of Week** list.
- 2 Select the weekdays you want for your report and click **Apply**.

Including or Excluding Holidays

You can choose to include or exclude U.S. government and business holidays.

To include or exclude holidays:

- 1 Click **Tools > Options**. The Options dialog box opens.
- 2 Click **Holidays**.
- 3 In the **Select Holiday Set** field, select **U. S. Business Holidays** or **U. S. Government Holidays**.

- 4 Select **Include U.S. Government Holidays** to include those days in your report. Clear this option to exclude those days from your report.

Select **Include U.S. Business Holidays** to include those days in your report. Clear this option to exclude those days from your report.

Selecting Local or UTC Time

You can choose to represent data using its local time or Universal Time Coordinated (UTC).

Local time can be appropriate when the resources in question are specific to a time zone, for example, a file or application server used for a particular office or region.

UTC time can be appropriate for resources that are accessed from multiple time zones, for example, Web or database servers.

Select **UTC** to present data according to UTC time. Clear this option to use local time.

Use the tree control to select the groups and/or servers for your report.

NOTE: You can make selections from a number of different AppManager views, but you have to make them one view at a time. For example, you can make selections from servers in the IIS view, and then switch to the SQL view to make additional selections.

9.1.10 Locking a Context

Analysis Center allows you to lock a context, that is, enforce the same context setting from one report to the next. Each report has a default context, and when you switch from one report to another, the default context takes precedence unless you have locked the context from a previous report.

Locking a context is valuable when you want to, for example, run a number of different reports covering the same group of servers for the same time period, or run a report covering the same servers and metrics, but for a number of different time periods.

The control for locking a context is displayed in the upper-right corner. By default, a context is not locked. To lock a context, click the locking control.

To unlock a context, click the locking control again. Locking is not observed in circumstances in which reports do not include the same context. For example, you may lock the Knowledge Script context for a report, and then select another report that does not include the Knowledge Script context. In this case, locking is ignored. The Knowledge Script context does remain locked, however, if you switch to another report with that context.

Locking the Metric context is only effective when switching between reports whose Metric contexts are filtered in the same manner.

Some filtering of metrics is hard-coded in the report. For example, the *Average Memory Utilization by Server Over Time* report is hard-coded to include only metrics related to memory use. The effect of the filtering is indicated in the title bar of the context control, in this case, by the text **Memory Utilization**.

In this case, any other report whose Metric context control reads **Metric: Memory Utilization** has the same hard-coded filtering of metrics, and you can effectively lock the Metric context between those reports.

Another layer of filtering is achieved when you set the Application and Metric Type filters in the Metric context control.

For some reports that employ hard-coded filtering, you can also apply these additional filters. For report templates and reports based on templates, you can only filter by this method. When these additional filters are applied, there must also be a match between reports to lock the Metric context.

9.1.11 Refreshing a Context

Some contexts have a refresh feature that allows you to update the items you can select for that context while you are configuring a report. For example, you may want to refresh the Group context while you are setting it to see whether new AppManager views or new server instances have been added, or you may want to refresh the Data Source context to see whether new Data Sources have been added.

To refresh a context, right-click in the context control and select **Refresh**.

9.2 Understanding AppManager Control Center Management Groups

Analysis Center allows you to include AppManager Control Center (AMCC) management groups in the Group context of a report. You can view group of servers from single or multiple Data Sources. For example, you can create an AMCC management group to include both Oracle and SQL Server. However, you cannot create a view to include both Oracle and SQL Server.

Analysis Center recognizes AMCC management groups using auto-discovery, and then displays these groups in the View window and also in the Group context menu. When you create new AMCC management groups, Analysis Center can recognize and display them.

Analysis Center supports AMCC management group names that are less than or equal to 100 characters. However, for the AMCC management group names that exceed this limit, Analysis Center truncates the management group names to 100 characters. A view name can be same as an AMCC management name. To differentiate between the view name and the management group name, Analysis Center prefixes the AMCC management group names with **MG**.

For more information about AMCC, see the [NetIQ® AppManager® Control Center User Guide](#).

- ♦ [Section 9.2.1, “Reviewing the Views for AMCC Management Groups,” on page 84](#)
- ♦ [Section 9.2.2, “Viewing the AMCC Management Groups,” on page 85](#)

9.2.1 Reviewing the Views for AMCC Management Groups

You can create AMCC management groups from the following views:

- ♦ AM Standard Views
- ♦ AM Snap Views
- ♦ AM Dynamic Views
- ♦ Rules View

For more information, see the [NetIQ® AppManager® Control Center User Guide](#).

9.2.2 Viewing the AMCC Management Groups

To view AMCC management groups, add the AppManager Data Source in Analysis Center. For more information about adding Data Sources to Analysis Center, see the [NetIQ Analysis Center Management Guide](#).

The Configuration Card also displays information about AMCC management groups. For more information, see [Section 9.10, “Understanding the Configuration Card,”](#) on page 101.

Viewing the AMCC Management Groups in the View Window

Analysis Center displays the AMCC management groups in the View window. For more information, see [Section 7.2.3, “Views,”](#) on page 58.

To view AMCC management groups from the View window:

- 1 Log on to the Analysis Center computer.
- 2 Start the Analysis Center Console in the **NetIQ > Analysis Center** program folder.
- 3 Log on to the Analysis Center Console.
- 4 In the Navigation pane, click **Views**.

Viewing the AMCC Management Groups in the Group Context

Analysis Center displays the AMCC management groups in the Group context. For more information, see [Section 9.1.5, “Setting the Group Context,”](#) on page 77.

To view AMCC management groups in the Group context:

- 1 Log on to the Analysis Center computer.
- 2 Start the Analysis Center Console in the **NetIQ > Analysis Center** program folder.
- 3 Log on to the Analysis Center Console.
- 4 In the Navigation pane, select **Reports**.
- 5 Select a report for which you want to add the AMCC management groups.
- 6 In the Tasks pane, select **Context**.
- 7 In the Group context, select an AMCC management group from the **View** list.

9.3 Setting Report Properties

When you select a report in the tree view, its Properties controls are displayed on the Properties tab in the Tasks pane.

To set a property, do one of the following, depending on the property:

- ♦ Click the space to the right of the property and type a value.
- ♦ Make a selection from a drop-down list.
- ♦ Click a [...] button to open a dialog box.

Some properties are read-only.

The following topics discuss the possible properties for a report.

- ♦ [Section 9.3.1, “Attributes,” on page 86](#)
- ♦ [Section 9.3.2, “Chart > AxisX,” on page 87](#)
- ♦ [Section 9.3.3, “Chart > AxisY,” on page 87](#)
- ♦ [Section 9.3.4, “Chart > Chart3D,” on page 88](#)
- ♦ [Section 9.3.5, “Chart > ChartForecasting,” on page 89](#)
- ♦ [Section 9.3.6, “Chart > ChartLegends,” on page 89](#)
- ♦ [Section 9.3.7, “Chart > ChartSeries,” on page 90](#)
- ♦ [Section 9.3.8, “Chart > ChartType,” on page 90](#)
- ♦ [Section 9.3.9, “Display,” on page 91](#)
- ♦ [Section 9.3.10, “Display > Threshold,” on page 92](#)
- ♦ [Section 9.3.11, “Parameters,” on page 92](#)
- ♦ [Section 9.3.12, “Creating and Modifying Columns,” on page 93](#)

After you have created a report and retrieved the information in which you are interested, you can make changes to the chart properties and then refresh the chart without executing the report again. This capability allows you to fine-tune the presentation of information in your charts without the overhead of having to run the report to see each change.

To refresh chart properties after making a change, right-click in the Properties control and select **Refresh Chart**.

9.3.1 Attributes

Report attributes apply to the entire report.

Property	Description
(ID)	This read-only value is a string identifier used internally by Analysis Center.
Comments	Enter any string of text that you want to associate with the report.
Description	Enter a brief description of the report. This description is displayed beneath the title of the report in the Results pane.
LastModifiedBy	This read-only field identifies the last person to save the report
ModifyDate	This read-only field indicates the last time the report was modified in the database
ThresholdEvent	<p>Select True or False from the menu.</p> <p>If set to True, an entry is made in the Windows Event Log of the Web Service computer when a deployed version of the report contains a value that exceeds the threshold condition you define. For more information, see “Custom” on page 92.</p> <p>You must also enable event logging in the Options dialog box (Tools > Options > Enterprise Options). For more information, see Section 13.5, “Setting SQL Server Reporting Services Options,” on page 128.</p>

9.3.2 Chart > AxisX

Changes to these properties affect the X axis of the chart.

Property	Description
Font	Click the Browse [...] button to set font type and size in the Font dialog box. NOTE: You can also use the following properties to manually set values.
Font > Name	Select a font name from the menu.
Font > Size	Enter a font size in the field.
Font > Unit	Select the unit for the font size (for example, point or pixel).
Font > Bold	Set to True to display the font as bold.
Font > GdiCharSet	Enter a byte value that determines the GDI (Graphical Device Interface) character set used by this font.
Font > GdiVerticalFont	Set to True if this font object is derived from a GDI vertical font.
Font > Italic	Set to True to display the font in italics.
Font > Strikeout	Set to True to display the font in strikeout format. You cannot effectively employ the Strikeout and Underline properties together when deploying a report to SQL Reporting Services. Select one or the other.
Font > Underline	Set to True to display the font in underline format. You cannot effectively employ the Underline and Strikeout properties together when deploying a report to SQL Reporting Services. Select one or the other.
IntervalType	Determines the interval at which grid lines are drawn. If set to Auto , the chart control calculates the interval. If set to Default , the interval matches the Time context interval (for example, if the time range is 7 Days, and the interval is Day, then seven grid lines are drawn).
LabelInterval	Determines the interval at which labels are drawn. For example, if this value is set to 5, then a label is drawn every 5th grid line.
ShowLabels	Set to True to display labels.
Title	Enter a title for the axis.
WrapLabels	Set to True to wrap label text.

9.3.3 Chart > AxisY

Changes to these properties affect the Y axis of the chart

Property	Description
AutoScale	Set to True to allow the axis to scale as necessary to accommodate data.

Property	Description
Font	Properties for text along the Y axis. For an explanation of each property, see "Font" on page 87 .
LabelFormat	Select one of the following label formats: <ul style="list-style-type: none"> ♦ Default ♦ Number ♦ Percent ♦ Currency ♦ Scientific ♦ Hexidecimal ♦ Decimal ♦ FixedPoint
Maximum	Enter a maximum value for the axis.
Minimum	Enter a minimum value for the axis.
Title	Enter a title for the axis.

9.3.4 Chart > Chart3D

Changes to these properties affect the presentation of a three-dimensional chart.

Property	Description
Clustered	For bar and column charts, set to True to display each data series separately along the X axis.
Enable3D	Set to True to render the chart as three-dimensional. Set to False to render the chart as two-dimensional.
LightStyle	Select a lighting style for the chart. <ul style="list-style-type: none"> ♦ None ♦ Simplistic ♦ Realistic Lighting affects the shading of the 3D chart components.
Perspective	Enter a numerical value (from 0 to 100) that represents the perspective of the chart. The higher the value, the greater the angle of perspective (background to foreground). This property is ignored if RightAngleAxes is set to True.
PointDepth	Enter a numerical value (from 0 to 1000) that represents the depth of chart controls along the Z axis. Applies to bar, column, line, pie, and spline charts.
PointGapDepth	Enter a numerical value (from 0 to 1000) that represents the distance between chart controls along the Z axis.

Property	Description
RightAngleAxes	When set to True , the X and Y axes of a chart are rendered at right angles to one another (isometric projection). When set to True, Perspective property is ignored.
WallWidth	Enter a numerical value (from 0 to 30) to determine the thickness of the walls of the 3D grid.
XAngle	Select a value (from -90 to 90) to determine the rotation of the chart around its X axis.
YAngle	Select a value (from -90 to 90) to determine the rotation of the chart around its Y axis.

9.3.5 Chart > ChartForecasting

Changes to these properties affect how a forecast line is displayed in the chart.

Property	Description
Color	Select a color for the line depicting forecast value.
DaysForForecasting	Select the number of days into the future that you want to forecast.
ShowForecasting	Set to True to display a forecast line in the chart.

9.3.6 Chart > ChartLegends

Changes to these properties affect how the chart legend is displayed.

Property	Description
Alignment	Select the placement of the legend relative to the Docking property value. Choose from Near (top or left), Center, or Far (bottom or right).
DisableLegend	Set to True to disable the legend. If set to False, the legend is displayed.
Docking	Select the placement of the legend relative to the chart. Choose from Right, Left, Top, or Bottom. Used in conjunction with the Alignment property.
Font	Set properties for text in the legend. For an explanation of each property, see "Font" on page 87 .
InsideChartArea	Set to True to display the legend within the area of the chart.
Style	Set to Column , Row , or Table to determine how the legend text is ordered (top to bottom or left to right).

9.3.7 Chart > ChartSeries

Changes to these properties affect each data series in a chart.

Property	Description
Font	Set properties for text in the chart series. For an explanation of each property, see "Font" on page 87 .
LabelValueAngle	Use this property if ShowLabelValues is set to True and ShowSmartLabels is set to False. Values from 90 to -90 determine the angle of the label relative to the chart control. 0 degrees is horizontal. Negative values move the label counterclockwise; positive values move the label clockwise.
MarkerStyle	Select the geometric shape used to identify each value in a series. Choose None or one of the available geometric shapes in the list.
PointWidth	<p>Select the relative width of each bar or column in a chart. A value of 25, for example, is 25% of the possible width.</p> <p>If you are deploying reports from a Console installed on an English locale to a Report Server using a non-English locale, use the Default setting for this property to ensure consistency in how the charts are displayed.</p> <p>If you are deploying reports from a Console installed on a non-English locale to a Report Server using a non-English locale, the point width in the deployed report is always the default, regardless of what value you assign this property in the Console.</p>
ShowLabelValues	Set to True to display a numerical value for each graphical control in a chart (for example, each bar in a bar chart has a label indicating the exact numerical value).
ShowSmartLabels	Set to True to automatically position data point labels to prevent overlapping. If set to True, LabelValueAngle is ignored.

9.3.8 Chart > ChartType

Changes to this property affect the graphical style of the chart.

Property	Description
ChartType	<p>Select the graphical style of the chart, such as Area or Bar.</p> <p>For information on the limitations associated with different types of charts, see Section 9.11, "Chart Limitations," on page 102.</p> <p>If you change the chart type after you have created a report, you must click the Execute Report button again to ensure your changes. If you do not run a report after making changes, the chart legends may be incorrect.</p>

9.3.9 Display

Changes to these properties affect how data is displayed in the report.

Property	Description
(Columns)	<p>The Column Rules dialog box lets you define a separate presentation style for each column of data.</p> <p>Click the Browse [...] button to open the Column Rules dialog box. For instructions on using the editor, see Section 9.3.12, "Creating and Modifying Columns," on page 93.</p>
(RowFilter)	<p>This field displays a value that represents the custom filtering method applied to rows in the table.</p> <p>The value is derived from the custom filtering equation you apply to the table. For more information, see Section 7.6.3, "Filtering Lists," on page 61.</p>
(SortExpression)	<p>This read-only field displays the column name and direction by which the table is sorted.</p> <p>The value is derived from the sorting you apply to a column in a table (ascending or descending). No value is derived from Date/Time columns, and no value is exported for those columns when you deploy a report.</p>
NumericFormat	<p>Set this property to specify the format of numeric data in the report.</p> <p>Enter a string format, including the precision specifier (the number of significant digits to the right of the decimal). For example, <code>F<N></code>, where <code>N</code> is a positive number (a value of <code>F2</code> displays values to the second decimal point (19.55)).</p> <p>NOTE: The following formats are supported:</p> <ul style="list-style-type: none">♦ C or c (currency)♦ D or d (decimal)♦ E or e (exponential)♦ F or f (fixed-point)♦ G or g (general)♦ N or n (number)♦ P or p (percent)♦ R or r (round-trip) Guarantees that the string is parsed back to the same numeric value.♦ X or x (hexadecimal) In this case, the precision specifier indicates the minimum number of digits (for example, <code>X8</code> creates an output like 0002C45E).
RowLimit	<p>Specify the number of rows of data you want to display in the report. Enter 0 to display all rows.</p>
ViewMode	<p>Select the way in which you want to display data in the report (in a chart, in a table, or in a chart and table).</p>

9.3.10 Display > Threshold

Use these properties to set threshold indicator values. When values exceed the thresholds you set, those values are color-differentiated in the chart and table in the report.

Property	Description
Threshold	This read-only field identifies the type of threshold set for the report.
Above	Enter a maximum threshold value. Threshold indicators are displayed in charts and tables for data that exceeds this amount.
Below	Enter a minimum threshold values. Threshold indicators are displayed in charts and tables for data that falls below this amount.
Color	Highlights the rows or chart values that fail to meet the threshold. For instance, use this property to highlight the data that indicates machine uptime less than 99 percent. To set the color, click the right column next to the color property and select a color from the drop-down list.
Custom	<p>Enter a Boolean expression that defines the threshold condition (for example, <code>[column name] > 90</code>)</p> <p>You can find the column names in the Column Rules dialog box, under Attributes > Source. For more information, see Section 9.3.12, "Creating and Modifying Columns," on page 93.</p> <p>To enter thresholds based on multiple columns, use an expression like one of the following:</p> <ul style="list-style-type: none">♦ <code>[column name] > 35 AND [column name] < 90</code>♦ <code>[column name] > 90 OR [column name] > 50</code> <p>Notes</p> <p>You can configure a report to write an entry to the Windows Event Log when this threshold is exceeded. For more information, see "ThresholdEvent" on page 86.</p> <p>Any values that exceed the threshold are visually distinguished from other values in the table (not in the chart).</p> <p>If your Windows operating system is using a non-English locale, you must enclose decimal values in single quotes, for example <code>'4567.8'</code>.</p>
Type	<p>Select a threshold type:</p> <ul style="list-style-type: none">♦ None (no threshold applied)♦ Above (values above threshold are differentiated)♦ Below (values below threshold are differentiated)♦ Both (Above and Below thresholds are observed)♦ Custom (Custom expression is evaluated to determine threshold)

9.3.11 Parameters

Parameters are properties for variables in a report. For example, in a *Top N Computers...* report, use the Parameter property to set the number of computers; in a *Trend and Prediction* report, use it to set the number of days into the future for which values are predicted.

9.3.12 Creating and Modifying Columns

When you click the [...] button in the Column property field, the Column Rules dialog box opens. Initially, it displays columns in the report that you have selected and generated.

Using this dialog box, you can alter the display of data in a column, create new columns populated from filtered or arithmetically modified data in other columns, and create links to other reports.

To change the order of column rules (and the order in which columns are displayed in the report), select a rule from the **Members** list, then click the up or down arrow to move the rule to a new position.

To remove a column rule, select the rule from the Members list and then click **Remove**.

Set the property controls as indicated below:

Property	Description
Attributes	
Source	This property determines which column of data is affected by the rule. Specifying a new name creates a new column. Type a name for the column or select one from the list.
Chart	
LineColor	Select a color for the chart control that represents the data.
LineType	Select a type for the chart control that represents the data (for example, bar or column).

Property	Description
Expression	
Expression	<p>Type a user-defined expression to determine the contents of the column. You can, for example, enter a new column name in the Source property</p> <p><i>Sum Columns 1 & 2</i></p> <p>and then enter an expression such as the following to create a new column that presents the sum of columns 1 and 2.</p> <p><code><MetricDimensionCol1> + <MetricDimensionCol2></code></p> <p>In the example above, <code>MetricDimensionCol1</code> and <code>MetricDimensionCol2</code> refer to the metric member dimension name associated with each column in the expression.</p> <p>To determine the name of a column dimension, click the Source drop list to display a list of dimension names.</p>
ExpressionType	Select the type of value returned by the expression. To use numerical formatting (Format property), you must select a numeric expression type.
Format	
Format	Type a .NET format property (for example, F2 displays the data as a floating point value with two decimal places). For details about supported numeric formats, see http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cpguide/html/cpconstandardnumericformatstrings.asp . For details about supported date formats, see http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cpguide/html/cpconstandarddatetimeformatstrings.asp .
Hidden	Set to True to hide the column.
Title	Type a title for the column.
Links	
Cell	<p>Use this property to link a report to each cell in the column. Click the Browse [...] button to select the report to which you want to link a cell. For information, see Section 9.9, "Linking Reports," on page 100.</p> <p>When you click a cell that is a link to another report, the linked report is displayed in the Results pane.</p>
Header	<p>Use this property to link a report to the column header. Click the Browse [...] button to select the report to which you want to link the column header. For information, see Section 9.9, "Linking Reports," on page 100.</p> <p>When you right-click a column header that is a link to another report, the Drill Into Linked Report command is displayed. Click that command to display the linked-to report in the Results pane. If the column header is used as the chart legend, you can click the legend to display the linked-to report.</p>
Summary	
DisplayFormat	
DisplayInFooter	Select True or False to display or not display the summary information in the footer.

Property	Description
Summary Type	<p>Select the type from the drop-down list:</p> <ul style="list-style-type: none"> ♦ None - No summary ♦ Average - Display the numeric average of the column data. ♦ Count - Display the total count of the column data. ♦ Max - Display the maximum value for the column data. ♦ Min - Display the minimum value for the column data, ♦ Sum - Display the sum of a number of columns.

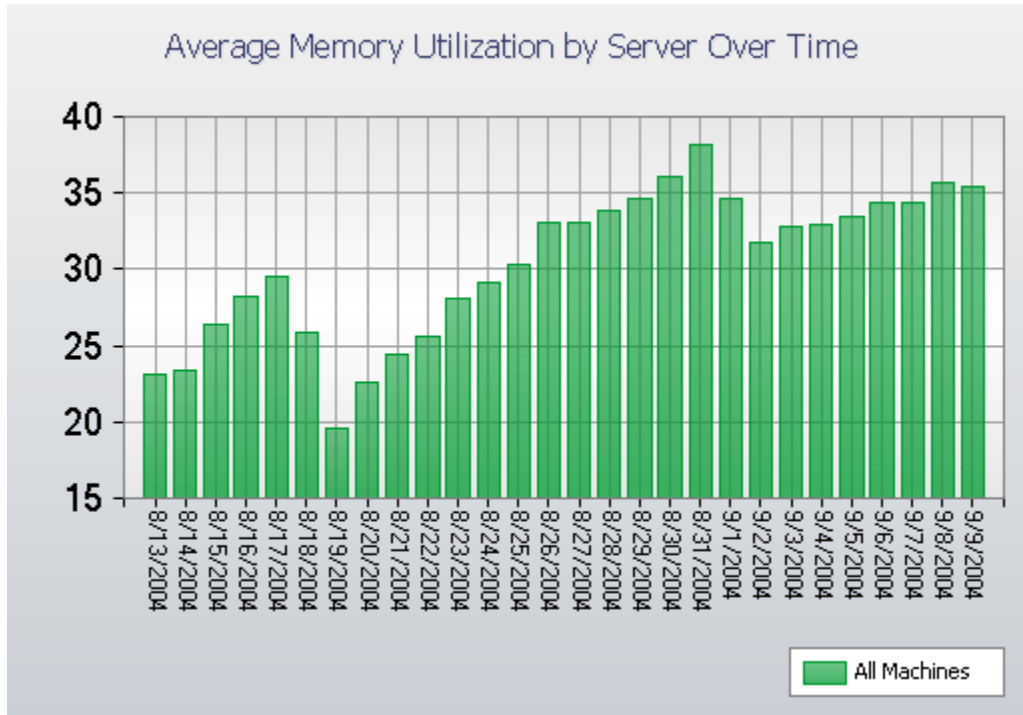
9.4 Using the Chart Toolbar

When you display a report in chart form, a chart toolbar is automatically displayed at the top of the chart. The toolbar options work with the cached report, so your changes are displayed right away. You do not have to run the report again to see your changes. You only need to run the report to update the data not the report presentation.

Toolbar Option	Description
Copy Chart	Saves a copy of the chart to the clipboard. From there, you can paste it into another application.
Print Chart	Prints the chart.
Print Preview	Displays a preview of the chart before you print it. You must have a printer installed.
Export Chart	Saves a copy of the chart and opens it in the default viewer for that file type.
Toggle Chart Legend	Toggles between displaying or hiding the chart legend.
Toggle 3D View	<p>This icon allows you to toggle between three 3D options:</p> <ul style="list-style-type: none"> ♦ 3D Chart View ♦ Cluster 3D ♦ Right Angle 3D
Select Chart Type	<p>This option allows you to change the type of chart. The drop list shows numerous chart options: see http://www.dundas.com/Products/Chart/RS/Features/index.aspx#Chart_Types__ for visual illustrations of chart types. Certain chart types cannot be combined in one report. For more information, see Section 9.11, "Chart Limitations," on page 102.</p>
Refresh Chart	Refreshes the chart display.

9.5 Making Easily Read Charts

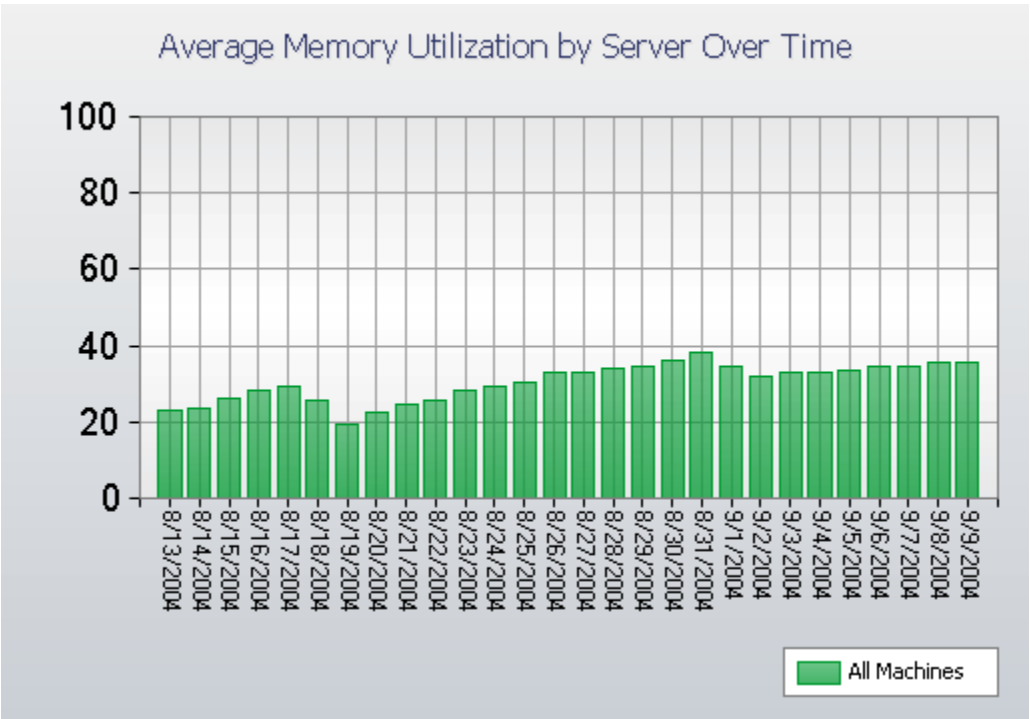
How you set the properties for a chart determines how easily the information in the chart is understood. For example, you may be preparing a report about average memory use for the past four weeks in which you are dealing with data based on percentage values $x.x$. If you leave the `AxisY > AutoScale` property at its default setting of `True`, you will produce a chart similar to the following:



The maximum value for the Y axis is calculated based upon the maximum value in the report. The chart above gives an accurate representation of the values, but you might be able to provide a more meaningful context in which to present that information by making the following changes to the `AxisY` properties:

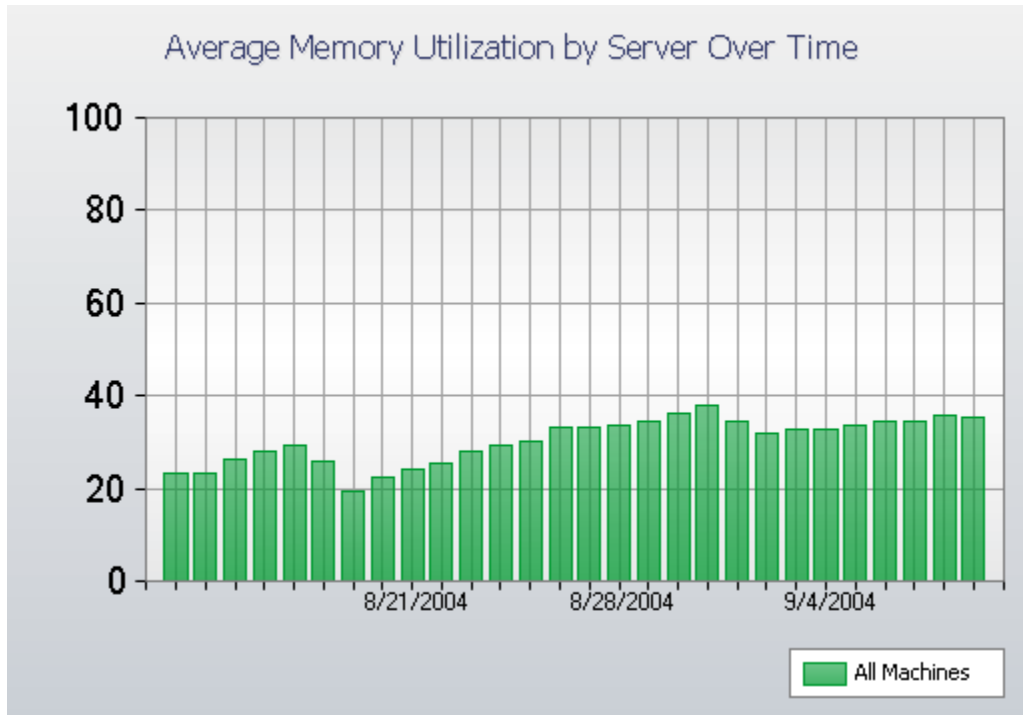
- ♦ `AxisY > AutoScale = False`
- ♦ `AxisY > Minimum = 0`
- ♦ `AxisY > Maximum = 100`

In this case, you are setting the Y axis of the grid to match the possible range of values (0% to 100%). Your chart would then look something like this:



With a chart like the one above, you can quickly see what percent of the maximum is being utilized.

Another change you can make to the properties to make the chart clearer is to limit the number of X axis labels. In a report like this, it might not be essential that each date of the last four weeks is explicitly cited. You might be able to do well with every seventh date, and so change the `AxisX > LabelInterval` property from 1 to 7:



If you have labels that are especially long, you can also set the `AxisX > WrapLabels` property to `True` to have the text wrap.

These are just a few of the ways you can use properties to clarify the information in your charts and make them more easily understood. Before you deploy your reports, take some time to experiment with the chart properties to be sure you are presenting information in the best way for its intended audience.

When you have the properties set the way you want, be sure to save the report.

9.6 Using Multiple Y Axes in a Chart

You can chart data using a second Y axis. This allows you to chart two metrics for the same data in one report. For instance, if you want to chart both the quantity and percentage of your data you would use multiple Y axis.

To add a second Y Axis:

Right-click the column that you want to show in the right hand Y axis and select **Show in Y2 Axis**.

9.7 Exporting and Printing Charts and Tables

You can export the chart and/or table in a report. Charts can be exported to a variety of image formats. Tables can be exported to spreadsheet, Web, and text formats.

To export a chart:

- 1 On the chart toolbar, click **Export Chart**.
- 2 Type a file name for the chart image.
- 3 Select the image format in which you want to save the chart. Choose from the following format options: BMP, EMF, GIF, JPEG, PNG, SVG, and TIFF.
- 4 Click **Save**.

To export a table:

- 1 Right-click in the table and select **Export**.
- 2 Type a file name for the table.
- 3 Select the file format for the table. Choose from the following format options:
 - ♦ Microsoft Excel Workbook (XLS)
 - ♦ Web page (HTML)
 - ♦ XML file (XML)
 - ♦ Text file (TXT)
- 4 Click **Save**.

To print a chart:

On the chart toolbar, click **Print Chart**.

To print a table:

Right-click in the table and select **Print**.

9.8 Saving, Moving, and Renaming Reports

You can save, rename, or move a report.

- ♦ [Section 9.8.1, “Saving Reports,” on page 99](#)
- ♦ [Section 9.8.2, “Moving Reports,” on page 100](#)

9.8.1 Saving Reports

To preserve the original versions of the reports, you cannot save the original set of Analysis Center reports under their default names. When you try to save an original report, you are forced to save it under another name. After you have saved it under another name, however, you can continue to perform save operations using the new name.

When you save a report, it is saved under its current name with its current context.

To save a report, right-click the report and select **Save Report**.

You can also save a report under another name, which is useful if you want to use an existing report as the basis for another report.

To save a report under another name:

- 1 Right-click the report in the Navigation pane and select **Save Report As**. The Save Report As dialog box is displayed.
- 2 In the **Save in** tree, select the folder in which you want to save the report.

NOTE: You can right-click a folder and select **New Folder** to create additional folders.

- 3 In the **Report Title** field, type a new title for the report.
- 4 Click **Save**. The report is saved with its new title in the folder you selected. Its current context is preserved.

NOTE: When you save an AppManager report, the computer and servers that are part of the Group context are referenced according to their current AppManager view/group locations. If a computer or server is moved to a different view or group in AppManager after you have saved the report, you will need to update the Group context to reselect those objects to continue including their data in the report.

9.8.2 Moving Reports

You can move a report from one folder to another in the Navigation pane tree view.

To move a report:

- 1 Right-click the report in the Navigation pane and select **Move Report**.
- 2 Drag the report to a new folder.
- 3 Click **Close**.

9.9 Linking Reports

You can use the Column Rules dialog box to create links from one report to another. For example, you may have a report that illustrates HTTP requests for the past year, aggregated by month. You can create links from each monthly value to a report that gives the daily values for that month. You can also link from the daily values to reports about hourly values.

To make effective use of this drill-through capability, you must configure the linked reports ahead of time. For example, if you are going to link from a report about monthly HTTP requests to reports about daily HTTP requests, you must configure the daily reports first, and then link to them from the monthly report. By the same token, if you want to link from a daily report to hourly reports, you must configure the hourly reports first.

Each time you follow a link from one report to another, a new Multidimensional Expressions (MDX) query is made of the Data Warehouse based on the context of the new report.

To create links from one report to another, use the Cell and Header properties in the Column Rules dialog box. For more information, see [“Cell” on page 94](#) and [“Header” on page 94](#).

If you want to deploy a report that contains links to other reports, you need to first deploy those other reports. For example, if Report A contains a link to Report B, and Report B contains a link to Report C, then deploy the reports in the following order: Report C, Report B, Report A.

9.10 Understanding the Configuration Card

The Configuration Card allows you to view the current configuration for a report, based on the settings in the Properties and Context tabs when the report was last created. The contents of Configuration Card vary depending on the type of report. The Configuration Card for your report may not contain each object listed here. The following table lists the pane view objects:

Pane View Object	Description
Overview	Displays an overview of the report along with information about the type of data you can present.
Type	Displays the database connection type.
Database Connection	Displays the database connection name.
Title	Displays the report title.
Description	Displays the report description.
Modify Date	Displays the date of modification.
Comments	Displays comments, if any.
DashboardReport	This folder contains information about the time context parameters.
DashItem	This folder contains the entire tree view for each report in the dashboard.
Context Folders	The individual context folders provide specific information about how each context is configured. For example, you can tell how the tree control is used to implement selections, and which specific objects in the tree are selected. The number of folders varies depending on what context controls are available for the report.
StandardReport	This folder contains information about the SQL query used to get data for the report.

You can view the contents of the Configuration Card.

To view the Configuration Card:

- 1 Log on to the Analysis Center computer.
- 2 Start the Analysis Center Console in the **NetIQ > Analysis Center** program folder.
- 3 Log on to the Analysis Center Console.
- 4 In the Navigation pane, select a report.
- 5 On the **Report** menu, select **Configuration Card**.

The Configuration Card displays the AMCC management groups for a report in the Context Selections parameter. For example, if a report has **MG1** as an AMCC management group, then you see **Group Selection Group MG-MG1** in the Context Selections parameter.

9.11 Chart Limitations

The following table identifies the limitations associated with each chart type (for example, the chart types that cannot be combined in a report).

Chart Type	Limitations
Area	Cannot be combined with the following chart types: <ul style="list-style-type: none">♦ Bar♦ Doughnut♦ Pie♦ StackedBar
Bar	Can be combined with <i>only</i> the following chart types: <ul style="list-style-type: none">♦ Bar♦ StackedBar
Bubble	Cannot be combined with the following chart types: <ul style="list-style-type: none">♦ Bar♦ Doughnut♦ Pie♦ StackedBar
CandleStick	Cannot be combined with the following chart types: <ul style="list-style-type: none">♦ Bar♦ Doughnut♦ Pie♦ StackedBar
Column	Cannot be combined with the following chart types: <ul style="list-style-type: none">♦ Bar♦ Doughnut♦ Pie♦ StackedBar
Doughnut	Cannot be combined with <i>any other</i> chart type. Can only be used to represent a single series of data.
Gantt	Can be combined with <i>only</i> the following chart types: <ul style="list-style-type: none">♦ Bar♦ StackedBar

Chart Type	Limitations
Line	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ♦ Bar ♦ Doughnut ♦ Pie ♦ Stacked<any type>
Pie	<p>Cannot be combined with <i>any other</i> chart type.</p> <p>Can only be used to represent a single series of data.</p>
Point	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ♦ Bar ♦ Doughnut ♦ Pie ♦ StackedBar
Radar	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ♦ Bar ♦ Doughnut ♦ Pie <p>Can only be used to represent a single series of data.</p> <p>Does not support scrolling or zooming.</p>
Range	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ♦ Bar ♦ Doughnut ♦ Pie ♦ StackedBar <p>An exception occurs when the Enable3D property is set to True, and one or more of the columns contains no value for the last cell.</p>
RangeColumn	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ♦ Bar ♦ Doughnut ♦ Pie ♦ StackedBar <p>An exception occurs when the Enable3D property is set to True, and one or more of the columns contains no value for the last cell.</p>

Chart Type	Limitations
Spline	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ◆ Bar ◆ Doughnut ◆ Pie ◆ StackedBar
SplineArea	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ◆ Bar ◆ Doughnut ◆ Pie ◆ StackedBar
SplineRange	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ◆ Bar ◆ Doughnut ◆ Pie ◆ StackedBar <p>An exception occurs when the Enable3D property is set to True, and one or more of the columns contains no value for the last cell.</p>
StackedArea	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ◆ Bar ◆ Doughnut ◆ Pie ◆ StackedBar
StackedBar	<p>Can be combined with <i>only</i> the following chart types:</p> <ul style="list-style-type: none"> ◆ Bar ◆ StackedBar
StackedColumn	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ◆ Bar ◆ Doughnut ◆ Pie ◆ StackedBar
StepLine	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ◆ Bar ◆ Doughnut ◆ Pie ◆ StackedBar

Chart Type	Limitations
Stock	<p>Cannot be combined with the following chart types:</p> <ul style="list-style-type: none"> ♦ Bar ♦ Doughnut ♦ Pie ♦ StackedBar

9.12 Understanding Report Wizard

Analysis Center provides a wizard to help you generate reports easily and quickly. The Report Wizard allows you to generate reports based on AppManager servers or on AppManager knowledge scripts using suitable report templates. You can access this wizard from the Tools menu in the Console.

Before you use the Report Wizard, configure the AppManager Data Source and also verify whether the OLAP jobs are processed successfully. Provide the necessary information to the Report Wizard to generate reports as per your requirements. Also provide a folder name on your computer to save the reports. To access Report Wizard, verify whether you have the necessary permissions on the report templates and permissions to create, rename, or delete folders.

From the Console, navigate to the folder to view your reports. You can modify these report from the Analysis Center user interface. For more information about report contexts, see [Section 9.1, “Setting the Context for a Report,” on page 74](#).

The Report Wizard allows you to select report templates and other parameters for your reports. Along with generating the reports based on your inputs, this wizard also saves the reports in a folder of your choice.

To use the Report Wizard:

- 1 Log on to the Analysis Center computer.
- 2 Start the Analysis Center Console in the **NetIQ > Analysis Center** program folder.
- 3 On the **Tools** menu, click **Report Wizard**.
- 4 In the **Welcome to Report Wizard** dialog box, select **Server Name/Groups** or **Knowledge Script Category** to generate reports.
- 5 Click **Next**.
- 6 Complete the wizard by following the instructions on the pages. For more information about the fields on the window, see the Help.
- 7 Click **Finish**.
- 8 In the **New Report** dialog box, select a folder to save the reports.
- 9 Type a report name in the **Report Title** field.
- 10 Click **Save**.

10 Understanding Drill-Down Reports

Reports often display large amounts of data. If the data is fairly detailed, displaying every detail in one report might not be possible. The best solution to overcome this problem is to create a Table of Contents (TOC) report and a drill-down report. The TOC report displays computer data for the selected context, and allows navigation to the inter-linked drill-down report to view the underlying data. The drill-down report displays detailed information about the computer you select.

NetIQ Analysis Center provides templates to create drill-down reports. The drill-down reports are linked to the TOC report that lists the names of computers. When you select a multiple-metrics drill-down template and then select multiple metrics, the report displays all the selected metrics. However, when you select a single-metric drill-down template, the report displays only one metric that you have selected. For more information about each drill-down report, see its Configuration Card details. For the multiple-metrics drill-down templates, you can select only one measure. However, for the single-metric drill-down templates, you can select multiple measures.

The following table explains the drill-down templates:

Template	Purpose
Machine Group by Measure	Each row represents a computer group or individual computer and each column represents a measure. A measure is a statistic derived from the data.
Machine Group by Multiple Metrics	Each row represents a computer group or individual computer and each column represents a metric derived from the data.
Measure by Date Time	Each row represents a time increment and each column represents a measure.
Measure by Day of Week	Each row represents a day of the week and each column a measure.
Measure by Hour	Each row represents an hour of the day and each column a measure.
Measure by Minute	Each row represents an hour of the day expressed in minutes and each column a measure.
Metric by Date Time	Each row represents a time increment and each column a metric (data stream or group of data streams).
Multiple Metrics by Date Time	Each row represents a time increment and each column represents a metric.
Multiple Metrics by Day of Week	Each row represents a day of the week and each column represents a metric.
Multiple Metrics by Hour	Each row represents an hour of the day and each column represents a metric.
Multiple Metrics by Minute	Each row represents an hour of the day expressed in minutes and each column represents a metric.
TOC List by Server	Each row represents Computer details with a link to view the drill-down report and each column represents the computer metric. The TOC report also has links to other reports which are not drill-down reports.

- ◆ [Section 10.1, "Setting the Context for a Drill-Down Report," on page 109](#)
- ◆ [Section 10.2, "Saving the Drill-Down Report," on page 110](#)
- ◆ [Section 10.3, "Understanding the TOC Report," on page 111](#)
- ◆ [Section 10.4, "Setting the Context and Group Context for a TOC Report," on page 111](#)
- ◆ [Section 10.5, "Saving the TOC Report," on page 112](#)
- ◆ [Section 10.6, "Linking Drill-Down Reports," on page 112](#)
- ◆ [Section 10.7, "Executing and Deploying Drill-Down Reports," on page 113](#)

10.1 Setting the Context for a Drill-Down Report

The context of a drill-down report refers to the Metric, Measure, and Time frame included in the report. The following table describes the three different context controls you can use with a drill-down report:

Context Control	Purpose
Metric	<p>Specifies data for a drill-down report.</p> <p>Each data stream is identified by a string (for example, Memory Utilization). Generally, there are multiple instances of a data stream (for example, % Physical Memory Usage from each of your servers).</p> <p>The Application(s) list limits data to specific applications. For example, you can collect AppManager data from NT or from a Report server.</p> <p>The Metric Type(s) lists the following specific types of data streams:</p> <ul style="list-style-type: none">♦ AM Event Count♦ AM Event Occurrence♦ AM NT Performance Data <p>You can select a single data stream, or multiple individual data streams, or groups of data streams from various levels of the hierarchy.</p>
Measures	<p>Specifies statistics to compute for the data:</p> <ul style="list-style-type: none">♦ Average♦ Count♦ Maximum♦ Minimum♦ Standard Deviation♦ Sum
Time	<p>Specifies the time range for a drill-down report.</p>

- ♦ [Section 10.1.1, “Setting the Metric Context for a Drill-Down Report,” on page 109](#)
- ♦ [Section 10.1.2, “Setting the Measures Context for a Drill-Down Report,” on page 110](#)
- ♦ [Section 10.1.3, “Setting the Time Context for a Drill-Down Report,” on page 110](#)
- ♦ [Section 10.1.4, “Setting the Properties for a Drill-Down Report,” on page 110](#)

10.1.1 Setting the Metric Context for a Drill-Down Report

The Metric context lets you select the data for a drill-down report. You can filter your selections by application and by metric type.

To set the Metric context:

- 1 In the Navigation pane, expand **Templates > AppManager Templates > DrillDown** folders and select the drill-down report template.
- 2 In the Tasks pane, click the Context tab.
- 3 In the Context tab, click the Metric context.

- 4 From the **Application(s)** list, select the application or applications.
- 5 From the **Metric Type(s)** list, select a data stream, or multiple individual data streams, or groups of data streams from various levels of the hierarchy.

For more information about Showing and Hiding Context Buttons, see [Section 9.1.2, “Showing and Hiding Context Buttons,” on page 76.](#)

For more information about Using the Multi-State Tree Control, see [Section 9.1.3, “Using the Multi-State Tree Control,” on page 76.](#)

10.1.2 Setting the Measures Context for a Drill-Down Report

The Measures context lets you calculate statistics from the data in a drill-down report. Use the tree control to select the measures in which you are interested.

For more information about setting the measures context, see [Section 9.1.7, “Setting the Measures Context,” on page 78.](#)

10.1.3 Setting the Time Context for a Drill-Down Report

The Time context enables you to specify a time frame for your report. The time context for Drill-Down report reports is MDX-based. There is no restriction on the setting of start and end date ranges. Where there is a conflict in date ranges, Analysis Center resolves it in favor of the most restrictive time context. For more information, see [Section 9.1.9, “Setting the Time Context,” on page 79.](#)

10.1.4 Setting the Properties for a Drill-Down Report

A drill-down report provides you with the information about a particular computer. Parameters are properties for variables in a drill-down report. Therefore, you need to specify a name of a computer for the **DrillValue** parameter in the Properties pane.

To set properties for a drill-down report:

- 1 In the **Tasks** pane, click the **Properties** tab.
- 2 In the **DrillValue** parameter, enter the name of the server.

For more information about Attributes, Chart, and Display in the Properties tab, see [Section 9.3, “Setting Report Properties,” on page 85.](#)

10.2 Saving the Drill-Down Report

After updating the settings in the Context tab and the Properties tab, you can save the drill-down report using a unique name. To preserve the original version of the report, you cannot save the original drill-down report under its default name. When you try to save an original report, you are prompted to save it under another name. You can run the report after you save it.

NOTE: It is not mandatory to update the settings in the Context tab to save the drill-down report. However, saving of the drill-down report is mandatory before you run it. You can view the name of the report only when you select the Column properties when using the TOC Report, and link to the drill-down report.

To save a drill-down report:

- 1 In the Tasks pane, click **Save Report As**.
- 2 If you want to create a new folder, right-click and select **New Folder**.
- 3 In the **Save in** tree, select the folder in which you want to save the report.
- 4 In the **Report Title** field, type a new title for the report.
- 5 Click **Save**.

For more information about other tasks, see [Section 9.8, “Saving, Moving, and Renaming Reports,” on page 99](#).

10.3 Understanding the TOC Report

The TOC report is a parent report and the drill-down report is a child report. These two reports are inter-linked. The TOC report displays the summarized data about the computers. Using the link provided for each computer, you can navigate to the particular computer and view the underlying data. To run a drill-down report, you must link the TOC report to a drill-down report.

10.4 Setting the Context and Group Context for a TOC Report

The context of a TOC report refers to the Group, Metric, and Time frame included in the report. You can use the Group context to select computers individually or by group.

You must make settings in the Group, Metric, and Time context to run a TOC report. The procedures to make settings in the Metric and Time context are similar to the settings you make for a drill-down report.

For more information about setting the Metric context, see [Section 10.1.1, “Setting the Metric Context for a Drill-Down Report,” on page 109](#), and follow the procedures explained.

For more information about setting the Time context, see [Section 10.1.3, “Setting the Time Context for a Drill-Down Report,” on page 110](#), and follow the procedures explained.

The Group context specifies groups of servers and individual servers or server instances to include in a TOC report.

NOTE: For the TOC report, select only the name of individual computers or the name of All Machines. Analysis Center does not support master view, standard view, custom view, server groups, or management group (MG) as a linked report for TOC List by Server.

When a TOC List by Server template is selected in the navigation pane, a **View** list at the top of the Group context pane lists the views from the various repositories from which you have imported data.

To set the Group context:

- 1 In the navigation pane, expand **Templates > AppManager Templates > DrillDown** folders and select the **TOC List by Server** report template.
- 2 In the Tasks pane, click the **Context** tab.
- 3 In the Context tab, click the **Group** context.
- 4 From the **View** list, select a view to display the computers in the selected view.

- 5 Select **Show Instances** if you need to list computer instances (for example, SQL Server instances) in the tree control.
- 6 In the tree control, select the groups and/or computers.

10.5 Saving the TOC Report

After updating the settings, you must save the TOC report using a unique name. To preserve the original version of the report, you cannot save the original TOC List by Server Report under its default name. When you try to save an original report, Analysis Center prompts you to save it under another name. You can run the report after you save it.

To save a TOC List by Server report under another name:

- 1 In the Tasks tab, click **Save Report As**.
- 2 In the **Save in** tree, select the folder in which you want to save the report.
- 3 In the **Report Title** field, type a new title for the report.
- 4 Click **Save**.

For more information about other tasks, see [Section 9.8, “Saving, Moving, and Renaming Reports,” on page 99](#).

10.6 Linking Drill-Down Reports

You can use the **Column Rules** dialog box to create inter-links from a drill-down report to a TOC report. For example, you may have a drill-down report that illustrates average CPU utilization by hour for the past year. Before linking the drill-down reports, be sure to save the original drill-down report under another name. For more information, see [Section 10.2, “Saving the Drill-Down Report,” on page 110](#).

To link a drill-down report to a TOC report:

- 1 In the Navigation pane, select the TOC report.
- 2 In the Tasks pane, click the Properties tab.
- 3 In the Properties tab, click **Column Rules [1]** and then click the [...] button. Analysis Center displays the **Column Rules dialog box**.
- 4 Navigate to **Machine Properties > Attributes > Source**. By default, the value of **Source** is **Machine**. For the drill-down reports, you must select the source as **Machine**.
- 5 In the Links attribute, click **Cell**, and then click the [...] button. Analysis Center displays the **Pick Report dialog box**.
 - 5a In the **Pick Report** dialog box, navigate to the appropriate drill-down report and select it.
 - 5b Click **OK** to save the settings and then return to the **Column Rules** dialog box.
- 6 In the **Column Rules** dialog box, click **OK**.

10.7 Executing and Deploying Drill-Down Reports

After you have saved and linked the drill-down and TOC reports, you are now ready to run the reports.

You can run live (or ad-hoc) and deployed (or scheduled) reports. To run a live report, you set the context, run, and then view the contents of the report in the Analysis Center Console. When you run a live report, that data is cached until you run the report again. If you select a report that has been created, you see the cached data. To see more-recent data, run the report again.

To run deployed reports on a schedule, you configure the report to display the data in which you are interested (the same way you configure a live report), and then deploy the report to SQL Server Reporting Services. The scheduling and distribution of the report is handled from the SQL Reporting Services interface.

You must first deploy the drill-down report and then deploy TOC report. When deploying the TOC report, select the drill-down report to be linked.

NOTE: For a standalone drill-down report, you can modify the DrillValue property. However, when you view such a standalone report in SQL Reporting Services, the Parameters attribute is empty. For the Parameters attribute to be visible, you must deploy a drill-down report using the TOC report and then traverse to the child report through the TOC report.

For more information about deployed reports, see [Chapter 11, “Deploying Reports to SQL Reporting Services,” on page 115](#).

To run the drill-down reports:

- 1 In the navigation pane, select the TOC report which is linked to a drill-down report.
- 2 In the Tasks pane, click Execute Report.
The TOC report displays details of computers performance, both graphically and in table format as per the settings in the TOC report.
- 3 To view the drill-down report for a particular computer, click the computer link in the report table.
The drill-down report displays details of the particular computer, both graphically and in table format as per the settings in the drill-down report.

11 Deploying Reports to SQL Reporting Services

When you have configured a report to provide the information in which you are interested, you can then deploy that report to Microsoft SQL Server 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).

When you have deployed a report to SQL Reporting Services, further management of that report is carried out from the SQL Reporting Services interface. To successfully manage reports you have deployed, you need to have a thorough working knowledge of SQL Reporting Services. For more information, see [Reporting Services Books Online](#), the Microsoft documentation, which is provided with a default installation of SQL Reporting Services.

- ♦ [Section 11.1, “Security Considerations for Deploying a Report,” on page 115](#)
- ♦ [Section 11.2, “Unsupported Chart Properties,” on page 115](#)
- ♦ [Section 11.3, “Difference in Column Display,” on page 116](#)
- ♦ [Section 11.4, “Deploying Linked Reports,” on page 116](#)
- ♦ [Section 11.5, “Deploying a Report,” on page 117](#)

11.1 Security Considerations for Deploying a Report

Be aware that when setting report permissions in the Analysis Center console, in order for a user to deploy reports to Reporting Services, they must have permission to deploy a report from the console and have Administrator level permissions on the Reporting Services computer.

11.2 Unsupported Chart Properties

Several of the chart properties that you can configure for live reports in Analysis Center are not supported in SQL Reporting Services. These include:

♦ BoxPlot	♦ CandleStick	♦ Gantt
♦ Point	♦ Radar	♦ Range
♦ RangeColumn	♦ SplineArea	♦ SplineRange
♦ StepLine	♦ Stock	♦ ChartForecasting
♦ ChartMovingAverage	♦ LabelValueAngle	♦ ShowSmartLabels=False
♦ PointGapDepth (for values other than 10)	♦ PointDepth (for values other than 50)	

When you deploy a report with any of these properties, you are issued a warning that the property is not supported in SQL Reporting Services, but you can proceed with the deployment. For Analysis Center chart types that are not supported, SQL Reporting Services substitutes a chart type. Other unsupported properties are simply left out of the SQL Reporting Services version of the report.

11.3 Difference in Column Display

The Analysis Center console removes empty columns from charts. Empty columns may exist, for example, because you have selected a computer in the Group context that is not yet supplying data for a selection you have made in the Metric context.

When you deploy a report, SQL Reporting Services includes any empty columns in the charts. This is necessary so that columns that might be empty at the time of deployment can include data when it later becomes available.

11.4 Deploying Linked Reports

If you want to deploy a report that contains links to other reports, you need to first deploy those other reports. For example, if Report A contains a link to Report B, and Report B contains a link to Report C, then deploy the reports in the following order: Report C, Report B, Report A.

For details, see [Section 9.9, “Linking Reports,” on page 100](#).

11.5 Deploying a Report

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

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

To deploy a report to SQL Reporting Services:

- 1 Right-click the report in the Navigation pane and select **Deploy Report**. The Report Server Credentials pane is part of the Deploy Report dialog.
- 2 Complete the fields on the Deploy Report dialog including the Report Server Credentials pane as instructed below:

Field	Description
Report Name	Type the name you want for the report.
Report Server Location	<p>Select a URL for a Report Server.</p> <p>If the URL you want is not listed, select New from the drop-down list to open the New Report Server Location dialog box, enter the URL in the dialog box, and then click OK.</p> <p>Select My Reports radio button to have the report listed in the My Reports folder assigned to the account under which the Analysis Center console is running.</p> <p>Select Folder radio button to enter a specific public folder name in which to list the report. The default is NetIQ\Analysis Center\XXX\XXX\... where XXX\XXX\... is the names of the sub-items under the report tree.</p> <p>Click the Show last deployment information link to expand the Deploy Report dialog box and display the information that was entered the last time the report was deployed.</p>

Field	Description
Report Server Credentials NOTE: The account used to connect to Analysis Center must be an Analysis Center account with Execute a report permission.	<p>Select the method by which SQL Reporting Services connects to Analysis Center to run the report.</p> <ul style="list-style-type: none"> ♦ Select the Credential supplied by the user running the report radio button to have that user prompted for a user name and password when the report is run. ♦ Select the Windows NT Integrated Security radio button to use the credentials of the user running the browser in which SQL Reporting Services is running. <p>NOTE: If you use this option in an environment where the Analysis Center components are distributed among different computers, you may encounter a report-processing error due to the Windows “double-hop” issue in which Windows security credentials are not recognized for more than one connection (credentials are recognized from Server A to Server B, but not from Server B to Server C). If multiple connections are required to process the report, use the <i>Select shared Report Server Data Source</i> option, or for information about storing credentials on the Report Server, see Section A.4, “Reporting Services error “An error has occurred during report processing...”,” on page 142.</p> <ul style="list-style-type: none"> ♦ Select the Select shared Report Server Data Source radio button to select from a list of shared Data Sources specific to the Report Server to which you are deploying the report. If a shared Data Source does not exist, you can create one. <p>NOTE: Use this option if you want to also enable a subscription. For more information, see the next parameter and description.</p> <ul style="list-style-type: none"> ♦ Click the Edit link to open a browser displaying the SQL Reporting Services interface for editing the shared Data Source. You can then modify the credentials used by the Data Source.
Include report configuration card	Select the check box to include the configuration card with the deployed report.
Enable subscription	Select the checkbox to distribute the report by means of a subscription (via email or file share).
Delivery Method tab	Use the options on this tab to determine the manner in which the report subscription is delivered to recipients.
Delivered by	<p>Select Report Server File Share from the drop-down list to have the report delivered to a folder on a file share.</p> <p>Select Report Server E-Mail from the drop-down list to have the report delivered by email to a list of recipients.</p>
File Name	Type the file name you want to use for the report. The default file name is the report name.
Add a file extension when the file is created	Select this check box to add a three-character file extension to the file name. The extension is determined by the render format you select.
Path	<p>Type the UNC path to the file location (for example, \\computer name\C\$\report folder).</p> <p>Specify an existing folder.</p>
Render Format	Select the type of file that will be created. Select a type that corresponds to the application in which the report will be viewed.

Field	Description
Credentials used to access the file share	<p>Supply the credentials used to write to the file share.</p> <ul style="list-style-type: none"> ♦ For User Name, enter the user name for the account used to write to the file share. Use the format <i>domain\username</i>. ♦ For Password, enter the password for the account used to write to the file share. <p>NOTE: The account you identify must have write permissions to the folder. The user name and password must be correctly identified in the properties of the Report Server Data Source you are using for the report.</p>
Overwrite options	<p>Select the manner in which subsequent iterations of the report are saved.</p> <ul style="list-style-type: none"> ♦ Select the Overwrite an existing file with a newer version radio button to overwrite an existing version of the report with a new version. ♦ Select the Do not overwrite the file if a previous version exists radio button to prevent an existing version of the report from being overwritten. ♦ Select the Increment file names as newer versions are added radio button to add a time stamp or version number to each iteration of a file with that has the same name.
Report Server E-Mail options	
To CC Bcc	Type the email address of each recipient of the report (primary, copy, or blind copy). Separate multiple addresses with a semicolon (;).
Reply-To	Type the email address to which replies are sent.
Subject	Type the subject line of the email.
Include Report	<p>Select this option to embed or attach a copy of the report.</p> <p>NOTE: If you do not select either this option or the Include Link option, only the text in the Subject line is sent.</p>
Render Format	Select the type of file that will be created. Select a type that corresponds to the application in which the report will be viewed.
Include Link	<p>Select this option to include the URL for the report in the email.</p> <p>NOTE: If you do not select either this option or the Include Report option, only the text in the Subject line is sent.</p>
Priority	Select the importance level of the email (Low, Normal, or High).
Comment	Type the text you would like as the body of the email.
Schedule tab	Use the options on this tab to determine the schedule on which the report is rendered and delivered to recipients.
Once	Select this option to render and deliver the report only once.
Repeat after this number of weeks	Specify the weekly frequency at which the report will run (for example, a value of 1 means the report will run every one week; a value of 2 means the report will run every second week).
On day(s)	Select the days of the week on which the report will run.

Field	Description
Start time	Select this option to specify the time at which the report will run. Specify hour and minute values, and select either AM or PM.
Run Now	Select this option to run the report immediately.
Start on	Specify the date on which the schedule begins. Use the format mm/dd/yyyy.
End on	Specify the date on which the schedule ends. Use the format mm/dd/yyyy.

3 Click **Deploy**.

NOTE: If you make changes to a report in the Analysis Center Console, you will have to deploy the report again before those changes are displayed in the deployed version of the report. From the Console, if you delete reports that are already deployed, then Reporting Services may not display such reports correctly.

12 Using Dashboards

The Analysis Center Dashboard feature allows 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 offers several out-of-the-box dashboard reports. In the Navigation pane, the AppManager dashboards are located under **Reports > AppManager > Dashboards**.

For more information about specific dashboards, see the respective management guide. AppManager dashboards are listed in the [NetIQ Analysis Center Management Guide](#).

Although there are dashboard reports specific to each product, it is possible to create a dashboard that includes reports from more than one product. For more information on creating your own dashboard, see [Section 12.1, “Configuring a New Dashboard,” on page 121](#).

An open dashboard displays a thumbnail version of each of its member reports. From within the dashboard, click the title of a member report to view the full report. If you change a report in a dashboard, and then redeploy the report, you also need to redeploy the dashboard report.

You can use any dashboard as the basis for another by saving it as another name, and then adding and deleting the reports in which you are interested.

You can display either a chart or a table for each individual report.

You can set a context for the dashboard as a whole, and then set the properties for each individual report to observe either the dashboard context or the individual report context. If you are going to have any report use its own context, configure that context and save the report before including it in the dashboard.

- ♦ [Section 12.1, “Configuring a New Dashboard,” on page 121](#)
- ♦ [Section 12.2, “Adding Reports to a Dashboard,” on page 123](#)
- ♦ [Section 12.3, “Drilling Through Dashboard Reports,” on page 124](#)
- ♦ [Section 12.4, “Deploying Dashboard Reports,” on page 124](#)

12.1 Configuring a New Dashboard

You use an existing dashboard as the basis for a new one.

To configure a dashboard:

- 1 In the Navigation pane, expand the Reports folder.
- 2 Expand the **AppManager** folder, depending on the product dashboards with which you are working.
- 3 Expand the **Dashboards** folder for the selected product.
- 4 Select an existing dashboard to use as the basis for your new one.
- 5 Set the context for the dashboard the same way you set the context for an individual report. For more information, see [Section 9.1, “Setting the Context for a Report,” on page 74](#).

NOTE: To display the context controls for a dashboard, at least one of the reports included in the dashboard must share at least one context with the overall dashboard. For example, the Group or Time context. To configure a report to share a context with the overall dashboard, use the Configure Dashboard Members dialog box. For more information, see [Section 12.2, “Adding Reports to a Dashboard,” on page 123](#).

When you configure individual reports to share contexts with the dashboard as a whole, you can, for example, compare different types of data for the same group of computers over the same time range. For example, CPU and memory use for 10 different Web servers over the last month.

- 6 Set the properties for the dashboard to determine such attributes as the layout of the dashboard, which reports are included in the dashboard, and whether those reports use the context set for the dashboard or their own specific context settings.

Property	Description
Attributes	General attributes for the dashboard
(ID)	A read-only string identifier used internally by Analysis Center
Comments	Click in the field and enter any text string.
Description	Click in the field and enter a brief description of the dashboard
LastModifiedBy	A read-only attribute that identifies the last person to save the report
ModifyDate	A read-only attribute that identifies the last time the report was modified in the database
ThresholdEvent	Set to True to enable events when reports contain values that exceed the threshold you set. Events are written to the Windows Event Log on the Web Service computer.
Dashboard	Layout, reports, and context usage.
(DashItems)	<p>Indicates the number of reports included in the dashboard.</p> <p>Click the Browse [...] button to open the Configure Dashboard Members dialog box. For instructions adding reports to a dashboard, see Section 12.2, “Adding Reports to a Dashboard,” on page 123.</p> <p>NOTE: The Configure Dashboard Members dialog box lets you select reports for the dashboard, determine how a report is displayed in the dashboard, and which dashboard context settings are observed by the report.</p>

12.2 Adding Reports to a Dashboard

You use the Configure Dashboard Members dialog box to add reports to a dashboard. From the Properties tab for a selected dashboard report, click the **Browse [...]** button in the **DashItems** field.

The Configure Dashboard Members dialog box lists the reports that are currently included in the dashboard. When you select one of those reports, its dashboard properties are displayed.

To add a new report to the dashboard:

- 1 Click **Add**.
- 2 In the **Attributes > Report** property, click **Browse [...]**.
- 3 Select a report from the tree view, then click **OK**. The tree view of reports displayed in the Pick Report dialog box is the same as the one displayed under the Reports folder in the Navigation pane.

To remove a report from the dashboard:

- 1 Select the report in the Members list.
- 2 Click **Remove** and then click **OK**.

To set the dashboard properties for a report:

Select the report in the Members list to display its properties.

Property	Description
Attributes	General attributes for the report as it is displayed in the dashboard.
FullRow	Set to True to display a report across a full row of the Results pane. For dashboards, the Results pane is effectively divided into two columns and an infinite number of rows. If the FullRow value is True, a report is displayed across a full row, or both columns.
Report	Click the Browse [...] button, and then select a report name from the list. Use this list to select a report after you click the Add button.
RowLimit	Indicates the number of rows of data from the recordset to display in the report. Enter a positive or negative number. <ul style="list-style-type: none">♦ Use a positive value to display the first N rows in the recordset (for example, 5 displays the first five rows in the recordset).♦ Use a negative value to display the last N rows in the recordset (for example, -5 displays the last five rows in the recordset).
Viewable	This read-only field indicates view permissions: <ul style="list-style-type: none">♦ Allowed: the current user has permissions to view the report.♦ Denied: the current user does not have permission to view the report.♦ Not Available: the report is not available because it has been deleted.
ViewMode	Select whether the report is displayed as a Chart or Table . If you want to have both a chart and table for a report, you have to add two instances of the report to the dashboard, and then display a chart for one and a table for the other.

Property	Description
Visible	Set to True to determines whether a report is visible in the dashboard.
Context	Context settings for the report as it is displayed in the dashboard
<any context>	<p>Select whether the report uses the dashboard context setting (Shared) or its own context setting (Not Shared).</p> <p>For example, you might want the report to use the dashboard Time context (Shared), but use its own Group context (Not Shared).</p>

12.3 Drilling Through Dashboard Reports

If you want to see the full version of a report that is part of a dashboard, simply click the title of the report. The full version of the report is then displayed in the Results pane, allowing you to see both the chart and table if they are included. You can also drill further into the individual report if you have any linked reports that provide more detail. For more information, see [Section 9.9, “Linking Reports,”](#) on page 100.

12.4 Deploying Dashboard Reports

You deploy a dashboard report the same way you deploy an individual report. For more information, see [Chapter 11, “Deploying Reports to SQL Reporting Services,”](#) on page 115.

NOTE: You cannot deploy a dashboard that contains no individual reports.

You cannot deploy a dashboard that contains any individual reports that will not run properly, for example, due to an invalid context setting.

13 Performing Administrative Tasks

This chapter discusses the tools you can use to perform tasks associated with the administration of Analysis Center.

- ♦ [Section 13.1, “Setting Data Warehouse Properties,” on page 125](#)
- ♦ [Section 13.2, “Setting Default Data Source Values,” on page 125](#)
- ♦ [Section 13.3, “Setting Holiday Options,” on page 126](#)
- ♦ [Section 13.4, “Setting Report Management Options,” on page 127](#)
- ♦ [Section 13.5, “Setting SQL Server Reporting Services Options,” on page 128](#)
- ♦ [Section 13.6, “Setting Console Options,” on page 129](#)
- ♦ [Section 13.7, “Managing SQL Server Agent Jobs,” on page 131](#)
- ♦ [Section 13.8, “Editing the Web.config File,” on page 132](#)
- ♦ [Section 13.9, “Adjusting the Connection Timeout for the Web Service Web Site,” on page 135](#)

13.1 Setting Data Warehouse Properties

You can configure the following Data Warehouse options:

- ♦ The first month of the first quarter. You can use this to define a calendar or fiscal year
- ♦ Whether to enable the Analysis Center (OLAP Processing) job
- ♦ The schedule on which the OLAP Processing job runs

To set Data Warehouse options:

- 1 On the Tools menu, click **Options**.
- 2 From the list of Enterprise Options, select **Data Warehouse**.
- 3 Complete the fields on the window. For more information about fields on a window, see the Help.
- 4 Click **OK**.

13.2 Setting Default Data Source Values

Use the Default Values options to set default values for fields in the Add Data Source wizard.

To set default values:

- 1 On the Tools menu, click **Options**.
- 2 From the list of Enterprise Options, select **Default Values**.

- 3 Complete the fields on the window. For more information about fields on a window, see the Help.
- 4 Click **OK**.

13.3 Setting Holiday Options

The Holiday options allow you to manipulate two sets of holidays:

- ♦ U.S. Business Holidays
- ♦ U.S. Government Holidays

13.3.1 Managing a Holiday Set

You can rename a holiday set, and you can edit the individual days that make up the holiday set. You can also delete an existing holiday set.

To rename a holiday set:

- 1 On the Tools menu, click **Options**.
- 2 From the list of Enterprise options, select **Holidays**.
- 3 If you want to modify a holiday set other than the displayed set, select the set under the **Select Holiday Set** list.
- 4 Click **Rename**.
- 5 Type the new name of the holiday set and then click **OK**.

To edit an existing member of a holiday set:

- 1 On the Tools menu, click **Options**.
- 2 From the list of Enterprise Options, select **Holidays**.
- 3 From the list of holidays, select the one you want to edit (for example, Labor Day), and then click **Edit**.
- 4 Type a date and description of the holiday.
- 5 Click **Update**, and then click **OK**.

To add a holiday:

- 1 On the Tools menu, click **Options**.
- 2 From the list of Enterprise options, select **Holidays**.
- 3 If you want to add a holiday set, select the set under the **Select Holiday Set** list.
- 4 Type the date and description of the holiday you want to add in the **Holiday Date** and **Holiday Description** fields.
- 5 Click **Add** and click **OK**.

To delete a holiday:

- 1 On the Tools menu, click **Options**.
- 2 From the **Select Holiday Set** drop list, select the set from which you want to delete a holiday.
- 3 Select the holiday from the list, and then click **Delete**.
- 4 Click **OK** to close the Options dialog box.

13.4 Setting Report Management Options

The Report Management options let you:

- ♦ Restore folders and reports you have deleted from the `Reports` folder.
- ♦ Export reports to edit the XML, perhaps to make a change in a test or laboratory environment.
- ♦ Import reports, perhaps to include any altered reports in the Navigation pane.
- ♦ Migrate Analysis Center version 2.6 reports to their equivalent Analysis Center version 2.7 reports.

To use the Report Management options:

From the list of Enterprise Options, select **Report Management**.

To restore folders or reports you have deleted:

- 1 Select **Restore report(s)**.
- 2 Expand the tree view to display the folders and/or reports you have deleted.
Deleted folders and reports are identified by a red X and a cleared check box.
Folders and reports that are currently displayed in the Console are identified by selected check boxes. You cannot change the selection state for these items.
- 3 Select the reports and folders you want to restore.
- 4 Click **Restore** and then click **OK**. The folders and reports are restored to their original locations under the `Reports` folder in the Navigation pane.

To export reports:

- 1 Select **Export report(s)**.

NOTE: By default, the Export Reports option is disabled in a distributed environment. For more information, see the *NetIQ Analysis Center Release Notes*.

- 2 Expand the tree view to display the reports you want to export.
- 3 Select the check box for each report you want to export.
- 4 Click **Export**.
- 5 Navigate to the folder in which you want to save the reports.
- 6 Click **Save**, and then click **OK** to close the Options dialog box.

NOTE: If you are exporting multiple reports, they are saved as a single file, with a single file name. The XML for each report is contained in that file. Edit that file to edit the reports, and then import that file to make the new versions of the reports available in the Console.

To import reports:

- 1 Click **Import**.
- 2 Navigate to the folder that contains the reports you want to import, and select those reports.
- 3 Click **Open**, and then click **OK** to close the Options dialog box.

NOTE: Imported report contexts and properties are not reflected immediately in the Console. You will see any changes after you select any other report in the Navigation pane, and then return to and run the imported report.

To migrate reports:

- 1 Click **Migrate**.
- 2 After the Analysis Center 2.6 reports are migrated, a text file displays the following details:
 - ♦ Details of the migrated reports.
 - ♦ Reports that are not migrated.
- 3 Click **OK** to close the Options dialog box

NOTE

- ♦ This process does not migrate any custom reports.
 - ♦ On x86 computers, after a successful upgrade, migration of reports is performed from Analysis Center version 2.6. The reports that you have saved using the Saved As option from Analysis Center version 2.6 are migrated to their equivalent Analysis Center version 2.7 reports.
 - ♦ On x86 and x64 systems, after a new installation of Analysis Center, migration of reports is performed only when you import a report saved on Analysis Center version 2.6 into Analysis Center version 2.7.
 - ♦ Migration is not associated with the tree-view in the Report Management section. Clicking Migrate migrates all the reports in the database that are not compatible with Analysis Center 2.7, and were originally supplied with Analysis Center.
-

13.5 Setting SQL Server Reporting Services Options

You can configure four SQL Server Reporting Services options:

- ♦ The URL of the Report Server (the Report Server is created when you install SQL Reporting Services)
- ♦ The default folder on the Report Server to which deployed reports are saved
- ♦ Whether threshold exceptions in reports generate events
- ♦ Whether to include the report configuration card

To set Reporting Services options:

- 1 From the list of Enterprise Options, select **Reporting Services**.
- 2 Complete the fields as instructed below:

Field	Description
Default Report Server Location	Type the URL of the Report Server. NOTE: If the Data Extension and SQL Reporting Services are installed on a computer whose IIS Server has Secure Sockets Layer implemented, make sure the URL begins with https (not http).
Default Report Server Root Folder	Type the name of the default folder in which deployed reports are saved on the Report Server.
Enable report threshold event notification	Select this option to enable events when reports contain values that exceed the threshold you set. Events are written to the Windows Event Log on the Web Service computer. For more information about setting event thresholds for reports, see Section 9.3.1, "Attributes," on page 86 and Section 9.3.10, "Display > Threshold," on page 92 .
Include report configuration card	Select this option to include a configuration card with each deployed report.

- 3 Click **OK**.

13.6 Setting Console Options

You can configure several Analysis Center Console options:

- ♦ Color scheme
- ♦ Display of cached reports
- ♦ Display of report date range under Report title
- ♦ Display of tooltips in the context tree
- ♦ Display of the Logon dialog box
- ♦ Message logging associated with the operation of the Console

To set the Console options:

- 1 Click **Tools > Options**. The Options dialog box is displayed.
- 2 Expand the User Options folder and click **Console**.

3 Complete the fields as instructed below:

Field	Description
Color Scheme	Select a color scheme for the background color of the Console.
Show cached reports	<p>Select to display the cached data set for a report when you select the report. Cached data sets are located the ReportCache folder. For more information about the location of this folder, see Section 13.6.1, "Log File Locations," on page 131.</p> <p>To always run the report for the most recent data set, clear the cache by clicking Delete Files.</p>
Show report date range selection	Select to display the date range of the report beneath the report title in the created report.
Show report context tree tooltips	<p>Select to display tooltips for the report context tree control.</p> <p>Clear to hide tooltips for the report context tree control.</p>
Show Logon dialog	<p>Select to display the Logon dialog box when you start the Analysis Center Console.</p> <p>You do not have to display the Logon dialog box if:</p> <ul style="list-style-type: none">♦ You always connect to the same Web service.♦ You use your current Windows credentials to connect to the Web service. <p>For more information, see Section 7.1, "Starting the Console," on page 53.</p>
File Logging Level	<p>Select a logging level from the menu:</p> <ul style="list-style-type: none">♦ Off (no messages are logged)♦ Error (only error messages are logged)♦ Warning (error and warning messages are logged)♦ Info (error, warning, and informational messages are logged)♦ Verbose (all messages are logged) <p>Messages are written to the <code>NetIQTrace.log</code> file. For more information about the location of this file, see Section 13.6.1, "Log File Locations," on page 131.</p>
Event Logging Level	<p>Select the logging level from the menu:</p> <ul style="list-style-type: none">♦ Off (no messages are logged)♦ Error (only error messages are logged)♦ Warning (error and warning messages are logged)♦ Info (error, warning, and informational messages are logged) <p>Messages are written to the Windows Event Log.</p>

Field	Description
Data Warehouse Logging Level	<p>Select the logging level from the menu:</p> <ul style="list-style-type: none"> ♦ Off (no messages are logged) ♦ Error (only error messages are logged) ♦ Warning (error and warning messages are logged) ♦ Info (error, warning, and informational messages are logged) ♦ Verbose (all messages are logged) <p>Messages are written to the <code>AC_Configuration</code> database when tracing is enabled for the Web Service <i>and</i> the level of trace messages is equal to or greater than the level specified here.</p> <p>Tracing for the Web Service is set in the <code>Web.config</code> file. For more information, see Section 13.8.2, "Enabling Tracing," on page 133.</p>

4 Click **OK**.

13.6.1 Log File Locations

Log files are located in the following default locations:

- ♦ Cached data sets are in `%user%\AppData\Local\NetIQ\Analysis Center\ReportCache`
- ♦ Logged messages are in `C:\Users\All Users\NetIQLOG\NetIQTrace.log`

To view these files, you might need to enable **Show Hidden Files and Folders** in Windows Explorer.

13.7 Managing SQL Server Agent Jobs

When you select a Data Source in the Navigation pane, the list of associated SQL Server Agent job instances is displayed in the upper portion of the Results pane. When you select a job instance in the list, the job steps that make up the instance are listed in the lower portion of the Results pane.

You can right-click any job instance to issue the following commands:

- ♦ Start job (starts the SQL Server Agent job)
- ♦ Stop job (stops the SQL Server Agent job)
- ♦ Enable job (enables the SQL Server Agent job)
- ♦ Disable job (disables the SQL Server Agent job)
- ♦ Show Detail Log (displays details of how each step of the jobs was created)

If there is a problem with a job, you can use SQL Server Enterprise Manager to investigate the cause.

To view the history of a job in SQL Server Enterprise Manager:

- 1 Open SQL Server Enterprise Manager.
- 2 Expand the appropriate SQL Server.
- 3 Expand **Management**.
- 4 Expand **SQL Server Agent**.
- 5 Select **Jobs**.

- 6 Right-click the appropriate job and select **View Job History**.
- 7 Select **Show step details**.
- 8 Scroll through the list of steps to find the one on which the job failed and select that step.
- 9 Review the text in the **Errors and/or messages** field.

13.8 Editing the Web.config File

The Web.config file is used to configure the Analysis Center Web Service. The default location for the file is:

Program Files\NetIQ\Analysis Center\WebService\Web.config

You can modify the configuration of the Web Service by editing different portions of Web.config.

- ♦ [Section 13.8.1, "Adding Users," on page 132](#)
- ♦ [Section 13.8.2, "Enabling Tracing," on page 133](#)
- ♦ [Section 13.8.3, "Changing Timeout Values," on page 134](#)

13.8.1 Adding Users

By default, each time a user connects to the Web Service, Analysis Center first checks to see whether that user is identified in the AC_Configuration database as an Analysis Center user.

If the connecting user is an Analysis Center user, authentication proceeds based upon the Analysis Center permissions assigned to that user.

If the connecting user is not an Analysis Center user, Analysis Center looks at the local Windows user groups *Administrators* and *Users*. If the connecting user is a member of *Administrators*, then that user is added to the AC_Configuration database as an Analysis Center user with administrative permissions (full permissions for Analysis Center). If the connecting user is a member of *Users*, then that user is added to the AC_Configuration database as a non-administrative Analysis Center user.

The <appSettings> element allows you to enable or disable this process, and to specify a list of Analysis Center users with administrative permissions.

Using Web.config to add users to Analysis Center gives you a method of recreating users in the event someone deletes all users and groups from the Analysis Center Console.

The <appSettings> element is near the beginning of Web.config:

```
<appSettings>
<!--Add following Entry to remove nt group check entirely, no automatic group
additions-->
<!--<add key="NO NT GROUP CHECK" value="true" />-->
<!--When the following users connect, they are automatically added-->
<!--<add key="AC Administrators"
value="{localcomputer}\{account},{domain}\{account}" />-->
</appSettings>
```

Group checking is enabled by default. To disable this process, remove the comment tags from the following line:

```
<!--<add key="NO NT GROUP CHECK" value="true" />-->
```

so that it reads

```
<add key="NO NT GROUP CHECK" value="true" />
```

To add users with administrative permissions to Analysis Center:

- 1 Remove the comment tags from the following line:

```
<!--<add key="AC Administrators"
value="{localcomputer}\{account},{domain}\{account}" />-->
```

so that it reads

```
<add key="AC Administrators"
value="{localcomputer}\{account},{domain}\{account}" />
```

- 2 Replace `{localcomputer}\{account},{domain}\{account}` with the appropriate account information.
 - ♦ Use the `{localcomputer}\{account}` format for accounts local to the Web Service computer.
 - ♦ Use the `{domain}\{account}` format for domain accounts.
 - ♦ Separate multiple accounts with commas and no spaces.

13.8.2 Enabling Tracing

You can enable the logging of trace messages by editing the `<switches>` and `<listeners>` elements.

NOTE: Any given instance of the `Web.config` file may vary from the example used here, but you must make changes to the file exactly as illustrated.

Find the `<switches>` element near the end of the file:

```
<switches>
<!--Trace Level 0=Off, 1=Error, 2=Warning, 3=Information, 4=Verbose-->
<add name="NQLOGSQL" value="0" />
<add name="NQLOGEVENT" value="1" />
<add name="NQLOGFILE" value="1" />
</switches>
```

You can log trace messages in three places:

- ♦ The `NQLOGSQL` switch enables the logging of trace messages to the `AC_Configuration` database `LogMessage` table. You can open the `LogMessage` table using SQL Server Enterprise Manager.
- ♦ The `NQLOGEVENT` switch enables the logging of trace messages to the Windows Application Log. You can open the Application Log using the Windows Event Viewer.
- ♦ The `NQLOGFILE` switch enables the logging of trace messages to the `NetIQTrace.LOG` file. You can open `NetIQTrace.LOG` using a text editor like Notepad.

To set the level of logging to any destination, use the trace level values 0 - 4. For example, to log verbose messages to all destinations, edit the following lines as follows:

- ♦ `<add name="NQLOGSQL" value="4" />`
- ♦ `<add name="NQLOGEVENT" value="4" />`
- ♦ `<add name="NQLOGFILE" value="4" />`

After you edit the `<switches>` section, you then need to edit the `<listeners>` section, which is just below `<switches>`.

For each switch that you have enabled, you need to instantiate a corresponding listener. The SQL listener is instantiated by default. You need to explicitly instantiate the NQLOGEVENT and NQLOGFILE listeners. To instantiate those, add the following lines to the <listeners> element:

```
<add name="NQLOGEVENT" type="NetIQ.Diagnostics.NQEventLogListener,NQACSHARED2,
Culture=neutral, PublicKeyToken=990b740647d733f3"/>
<add name="NQLOGFILE" type="NetIQ.Diagnostics.NQFileLogListener,NQACSHARED2,
Culture=neutral, PublicKeyToken=990b740647d733f3"/>
```

NOTE: To successfully enable the NQLOGFILE switch and listener, the Web Service must be using an account that has sufficient permission to write to NetIQTrace.LOG.

13.8.3 Changing Timeout Values

The timeout values for connections to the various Analysis Center databases are defined in the <Connections> element. If you are running reports that return large data sets, the time required for the queries to fully run may exceed those connection timeout settings, causing the queries to abort. You can increase the timeout setting by editing the value for the TimeOut attribute for each <Connection> element. You should also edit the connection timeout value for the Web Service Web site. For more information, see [Section 13.9, "Adjusting the Connection Timeout for the Web Service Web Site," on page 135](#).

```
<Connections>
<Connection Name="ACOLAP" Server="localhost" OLAPCatalog="AC_OLAP"
ConnectionType="OLAP" TimeOut="3600" />
<Connection Name="AC" Server="localhost" Database="AC_Warehouse"
ConnectionType="SQL" TimeOut="3600" />
<Connection Name="AC_Config" Server="localhost" Database="AC_Configuration"
ConnectionType="SQL" TimeOut="3600" />
</Connections>
```

You can also increase the value for the executionTimeout attribute of the <httpRuntime> element, which governs the length of time a request is allowed to run before being automatically shut down by ASP.NET.

Find the <httpRuntime> element about two-thirds of the way through the Web.config file:

```
<httpRuntime executionTimeout="3600"
maxRequestLength="4096"
useFullyQualifiedRedirectUrl="false"
minFreeThreads="8"
minLocalRequestFreeThreads="4"
appRequestQueueLimit="100" />
```

Set the executionTimeout value to match the TimeOut values you set for the <Connection> elements above.

NOTE: If you continue to have report failures due to connection errors, try increasing these timeout values.

13.9 Adjusting the Connection Timeout for the Web Service Web Site

In addition to adjusting timeout values in `Web.config` to address problems with the time required for the report queries to fully run, you should also adjust the connection timeout value for the Web site that hosts the Web Service virtual directory. For more information, see [Section 13.8.3, “Changing Timeout Values,” on page 134](#).

To adjust the connection timeout value:

- 1 On the computer where you have installed the Web Service, click **Start > Programs > Administrative Tools > Internet Information Services (IIS) Manager**.
- 2 Expand the appropriate IIS Server.
- 3 Right-click the Web site hosting the Web Service virtual directory and select **Properties**.
- 4 Enter an appropriate value in the **Connection Timeout: ____ seconds** field.

The value you use depends entirely on your Analysis Center environment (for example, the system resources of each Analysis Center computer and the speed of your network) and the amount of data being returned by your report queries. If you continue to have report failures due to connection errors, try increasing this value.

- 5 Click **OK**.

14 Customizing Reports

This chapter provides information about customizing the Analysis Center reports.

- ♦ [Section 14.1, “Customizing Reports with Analysis Center Console,” on page 137](#)
- ♦ [Section 14.2, “Editing the Report XML,” on page 137](#)
- ♦ [Section 14.3, “Using Report Designer to Edit RDL Files,” on page 140](#)

14.1 Customizing Reports with Analysis Center Console

The simplest way to create a custom version of a report is to open the report in the Console, and then set the context and properties so that your information is presented in the appropriate format. When you have configured the report exactly as you like it, you can then save it under a new name.

For more information about setting the context and properties for a report, and saving different versions of a report, see [Chapter 9, “Generating Live Reports,” on page 73](#).

14.2 Editing the Report XML

You can also customize a report by editing its XML file. The XML files for Analysis Center reports are located in the following folders on the Analysis Center Data Warehouse computer:

- ♦ `\Analysis Center\Config\Reports\AC20` (reports that are displayed under the Reports folder in the Navigation pane)
- ♦ `\Analysis Center\Config\Reports\Templates` (report templates that are displayed under the Templates folder in the Navigation pane)

The following example describes the XML tags and how to modify them for the CPU Utilization By Server report.

The report file name is: `Performance.AverageCPUUtilizationByServer.XML`

You can open the file using Internet Explorer or any text editor.

- ♦ [Section 14.2.1, “XML Tags,” on page 137](#)
- ♦ [Section 14.2.2, “Modifying the XML,” on page 139](#)

14.2.1 XML Tags

The CPU Utilization By Server report has the following XML tags:

<REPORTSET FOLDER="Performance">

The `FOLDER` attribute determines the folder location of the report under the Reports folder. In this case, it is located under `Reports\Performance`.

<VIEW>Master</VIEW> determines which view is selected by default for the Group context. In this case, the Master view is selected. **<VIEW/>** is a child folder of the **<REPORTSET/>**

```
<NQREPORT ID="CPU Utilization by Server" Title="CPU Utilization by Server"
Description="Average CPU Utilization by Server">
```

- ♦ **<NQREPORT/>** folder is a child folder of the **<REPORTSET/>**.
- ♦ The **ID** attribute is a unique string identifier for a report within Analysis Center. If you make changes to the report and save it with a different name, you must edit this attribute to ensure that it is unique.
- ♦ The **Title** attribute is the name of a report as it is displayed in the Navigation pane and Results pane.
- ♦ The **Description** attribute is a description of the report that is displayed under the title of the report in the Results pane.

<PARAMETERS />

Determines which parameters are available for a report. In this case, there are none. Analysis Center uses parameters for defining N for Top N ... reports. The Console displays parameters in the Properties tab of the Tasks pane.

```
<CONTEXT TYPE="NetIQ.ACLib.Metrics.MetricContext,NQACLib" ID="1"
IsAggregate="false" Title="Metric:CPU Utilization"
MetricFilter="Application:NT,Unix;
Description1:%Performance Data;Description2:%Processor Utilization%;" />
<CONTEXT TYPE="NetIQ.ACLib.Times.TimeContext,NQACLib" ID="1"
IsAggregate="true" IsMultiple="true" TimeRangeName="Last 28 Days"
Interval="Day" />
```

The **CONTEXT** tags determine which contexts are available for a report, in this case the Metric and Time contexts also include the Group context, which is not shown here.

- ♦ The **TYPE** attribute identifies the context control, in this case, the **MetricContext** and **TimeContext** controls.
- ♦ The **ID** attribute identifies the instance of the context control. In most cases the value for this attribute is 1 because there is usually only one instance of a context control for a report. There can be multiple instances of a control, for example, when reports contain two time contexts. If there is more than one instance of a control, the second control would have an ID value of 2, and so on.
- ♦ The **IsAggregate** attribute determines whether data is aggregated in the time context. For example, the time range selected is Last 28 Days, and the data is aggregated by day.
- ♦ The **IsMultiple** attribute determines whether you can select multiple items within the context. For example, in the Time context, you can select a time range and the interval at which the data is aggregated.

The Metric context has some additional attributes that identify which data you can select for the report.

- ♦ The **Title** attribute sets a title for the context, which the Console displays in the title bar for the context control. The title is only informational, and does not determine which data can be selected. In the case of the Metric context, the title is **Metric:CPU Utilization**.
- ♦ The **MetricFilter** attribute determines which data is available for selection. The values for this attribute identify the cube dimensions from which you can select.

The **Application** value determines which categories of AppManager Knowledge Script data you can select from the Application dimension. For example, Exchange, NT, or SQL.

The **Description1** value determines which type of data within the application you can select from the Metric dimension. For example, performance or event data.

The Description2 value further filters the type of data you can select. For example, within performance data, you can limit the selection to Processor Utilization data.

```
<QUERY TYPE="NetIQ.ACLib.ACQUERY,NQACLib">
<CONTEXTS>
<CONTEXT TYPE="NetIQ.ACLib.Cubes.CubeContext,NQACLib"
ID="1" CubeName="vAMGeneric" />
</CONTEXTS>
<Template> WITH {TimeContext[1].MDX} {MetricContext[1].MDX}
{GroupContext[1].MDX} MEMBER [Measures].[Average Utilization] as
'([Measures].[MetricSum])/([Measures].[MetricCount])' SELECT {
{GroupContext[1].Name} } on Rows, {{MetricContext[1].Name} } on COLUMNS FROM
[{CubeContext.Name}{TimeContext[1].UTC}] WHERE
({MetricContext[1].AppFilter}, [Measures].[Average
Utilization], {TimeContext[1].Name}, {TimeContext[1].filter} ) </Template>
```

The QUERY tag defines the query run by the report.

- The TYPE attribute determines the type of query. In general, these reports run an MDX query (ACQUERY).
- Within the QUERY tag, the CONTEXTS tag determines which contexts identify the source of data. Each individual CONTEXT tag identifies a single context and context control.

The TYPE attribute for the CONTEXT tag identifies the context control, in this case, the CubeContext control.

The ID attribute identifies the instance of the CubeContext control. In most cases the value for this attribute is 1 because there is usually only one instance of this control for a report

The CubeName attribute identifies the cube that is queried.

- Within the QUERY tag, the TEMPLATE tag identifies the query template used for the report. Variables in the query template are identified by braces (for example, {TimeContext[1].MDX}). The values for those variables are determined by the context settings you make in the Console.

14.2.2 Modifying the XML

By modifying the report XML, you can, for example, take the CPU Utilization by Server report, which uses data collected by the NT_CpuLoaded Knowledge Script, and create a report about the CPU utilization of SQL Server processes based on data collected by the SQL_CPUUtil Knowledge Script.

To modify the XML:

- 1 Change the value for the VIEW tag to <VIEW>SQL</VIEW>
- 2 Change the first three attributes of the <NQREPORT> tag as follows:
 - ID="CPU Utilization by SQL Server Services". The ID value must be unique for Analysis Center reports.
 - Title="CPU Utilization by SQL Server Services"
 - Description="Average CPU Utilization by SQL Server Processes"
- 3 For the metric context, make the following changes:
 - Title="Metric:SQL CPU Utilization"
 - MetricFilter="Application:SQL;Description1%Performance Data;Description2%Process CPU Utilization%;"

NOTE: You can find the `MetricFilter` `Description` values by using Analysis Manager to open the `AC_OLAP` database, and view the data in the `vAMGeneric` cube. Under `Metric`, expand the `All Metrics`, and then `AM NT Performance Data`; you will see `% Process CPU Utilization`, which contains the data streams collected by the `SQL_CPUUtil` Knowledge Script.

- 4 In the `Analysis Center\Config\Reports\AC20` folder, save the file under the name `Performance.AverageCPUUtilizationBySQLProcesses.XML`.
- 5 Use `XMLCheckIn.exe` to check the file in to the `AC_Configuration` database. `XMLCheckIn.exe` is located in `\Analysis Center\bin`.

Use the following syntax:

```
xmlcheckin <path to file>\<file name>
```

The report is listed under `Reports\Performance` in the Navigation pane of the Console.

14.3 Using Report Designer to Edit RDL Files

Another option you have for customizing reports is to use Report Designer to edit the Report Definition Language (RDL) files for reports you have deployed to SQL Reporting Services. A thorough working knowledge of Report Designer is necessary for making this sort of modification to a report. For more information about using Report Designer, see the *Reporting Services Books Online* and *Microsoft Visual Studio .NET Documentation*.

A Troubleshooting

This appendix includes solutions for some problems that you may encounter. If you see any of the following error messages, try the accompanying solutions to rectify the underlying problems.

- ♦ [Section A.1, “Database open error,” on page 141](#)
- ♦ [Section A.2, “Invalid URL, Server unavailable,” on page 141](#)
- ♦ [Section A.3, “The underlying connection was closed: Unable to connect to the remote server,” on page 142](#)
- ♦ [Section A.4, “Reporting Services error “An error has occurred during report processing...”,” on page 142](#)
- ♦ [Section A.5, “OLAP processing job fails: Inaccessible Data Mart,” on page 143](#)

A.1 Database open error

The Remote Registry service should run on all Analysis Center computers. Otherwise you can get this error message:

```
###--> ERROR: » - Error: -2147467259  
Description: Cannot open database requested in login 'AC_Configuration'. Login  
fails.
```

A.2 Invalid URL, Server unavailable

You may encounter this message when attempting to log on to the Console when the Web Service is installed on a computer running Windows Server 2003. One known cause of this problem is a change in the password for the domain account used for the Analysis Center Application Pool identity, which prevents the Web Service from connecting to the Data Warehouse. If the password for the domain account changes, it must be updated in the properties for ACAppPool.

To update the Application Pool identity:

- 1 On the Windows Server 2003 computer that is hosting the Web Service, click **Start > Programs > Administrative Tools > Internet Information Services (IIS) Manager**.
- 2 Expand **Application Pools**.
- 3 Right-click **ACAppPool** and select **Properties**.
- 4 Click the **Identity** tab.
- 5 Verify that the **Configurable** option is selected and that the correct domain account is displayed in the **User name** field.
- 6 In the **Password** field, enter the correct password for the domain account.

A.3 The underlying connection was closed: Unable to connect to the remote server

You will see this error message when connections are lost between Analysis Center components, for example, if a physical network connection is lost due to, perhaps, a down router or switch, or the computer being unplugged from the network, or if the IIS server hosting the Web Service is not running because, for example, one of the component IIS services is not running, or the computer hosting the IIS server is not running.

A.4 Reporting Services error “An error has occurred during report processing...”

The following error message is displayed in Report Manager when the connections required to process a report cannot be made SQL Reporting Services to Data Extension to Web Service to Data Warehouse:

“An error has occurred during report processing... Cannot create a connection to data source... The request failed with HTTP status 401: Access Denied.”

This error occurs when:

- You have selected Windows NT Integrated Security as the Report Server Credentials when deploying a report.
- Analysis Center components are distributed among a number of computers.

Under these circumstances, you encounter the Windows “double-hop” issue in which Windows security credentials are not recognized for more than one connection. Credentials are recognized from Server A to Server B, but not from Server B to Server C.

You can overcome this problem by using the **Select shared Report Server Data Source** option for Report Server Credentials when deploying a report, and selecting the **Credentials stored securely in the report server** property for either the shared Data Source or the individual deployed report.

For more information about deploying a report, see [Section 11.5, “Deploying a Report,” on page 117](#).

To set the Credentials stored securely in the report server property for a Data Source, use Report Manager to edit the Data Source properties:

- 1 Select the Data Source in Report Manager.
- 2 In the Connect Using section, select the **Credentials stored securely in the report server** option.
- 3 Enter the **User name** (<domain\user>) and **Password**.
Do not select either of the following options: **Use as Windows credentials** or **Impersonate the authenticated user**. The Analysis Center Web Service handles authentication of the user to the Data Warehouse.
- 4 Click **Apply**.

To set the Credentials stored securely in the report server property for a deployed report:

- 1 Open the Properties page for the report in Report Manager.
- 2 Click the **Data Sources** link on the Properties page.
- 3 Select **A custom Data Source**.
- 4 In the Connect Using section, select **Credentials stored securely in the report server**.

5 Enter the user name (<domain\user>) and password.

Do not select either of the two options **Use as Windows credentials** or **Impersonate the authenticated user**. The Analysis Center Web Service handles authentication of the user to the Data Warehouse.

6 Click **Apply**.

A.5 OLAP processing job fails: Inaccessible Data Mart

If you add a Data Source for which the Data Mart does not exist or is inaccessible, you may run into problems when you try to delete the Data Source. In this scenario, the first run of the OLAP processing job fails after you delete the Data Source.

This failure causes no real problem in Analysis Center. The second run of the OLAP processing job succeeds.

To avoid the OLAP job failure, when deleting a Data Source that has an inaccessible Data Mart, do not delete the Data Mart database. The Data Mart may be inaccessible because the wrong authentication credentials were provided when creating the Data Source.

When prompted to remove the Data Mart database, select **No**.

