



SIEBEL[®] 7
eBusiness

SIEBEL ANALYTICS INSTALLATION AND CONFIGURATION GUIDE

VERSION 7.7, REV. A

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Introduction to Siebel Analytics Installation and Configuration Guide

Siebel Analytics has two main product configurations:

- Stand-Alone (Siebel Analytics Server)

The stand-alone configuration involves the Siebel Analytics platform only (Siebel Analytics Server and Web Server). You must develop your own analytics applications and configure them to connect to legacy data warehouses or other data sources.

- Integrated (Siebel Analytics applications)

You can configure Siebel Analytics applications to run with Siebel operational applications, using the Siebel Data Warehouse or prebuilt (and sometimes specialized) data warehouses.

Siebel Analytics Installation and Configuration Guide provides information on installing and configuring all components of Siebel Analytics, both stand-alone and integrated configurations.

The remainder of this section explains the audience for this guide and its organization. Subsequent sections cover the following topics:

- [“Analytics Applications Installation Prerequisites” on page 16](#)
- [“Siebel Analytics Installation Options” on page 17](#)
- [“Revision History” on page 21](#)
- [“Related Siebel Analytics Documentation” on page 25](#)

NOTE: This version of the guide (version 7.7) applies to the 7.7 release of Siebel Analytics and Siebel Data Warehouse. It does not apply to any previous releases. Siebel Analytics 7.7 is compatible with Siebel 7.5 operational applications.

Audience for Siebel Analytics Installation and Configuration Guide

This book will be useful primarily to people whose titles or job descriptions match one of the following:

| | |
|--|--|
| Database Administrators | Persons who administer the database system, including data loading, system monitoring, backup and recovery, space allocation and sizing, and user account management. |
| Marketing Administrators | Persons responsible for setting up and maintaining a marketing department. Duties include designing and managing campaigns, product marketing information, and product distribution lists. |
| Siebel Application Administrators | Persons responsible for planning, setting up, and maintaining Siebel operational applications. |
| Siebel Application Developers | Persons who plan, implement, and configure Siebel operational applications, possibly adding new functionality. |
| Siebel System Administrators | Persons responsible for the whole system, including installing, maintaining, and upgrading Siebel operational applications. |

This guide assumes that you are knowledgeable in the areas of relational databases, decision support systems, and the Windows or UNIX operating systems that you are using.

Organization of Siebel Analytics Installation and Configuration Guide

Siebel Analytics Installation and Configuration Guide is organized as chapters (referred to as *sections* in the HTML form of this guide). Each chapter or section is devoted to a particular aspect of the Siebel Analytics Server installation and configuration environment. Siebel Analytics administrators should read the chapters that will apply to their implementation.

Siebel Analytics includes two installer programs: one that installs the Siebel Analytics Server as a stand-alone server and one that automates the integration of Siebel Analytics with Siebel operational applications. The installer for the integrated configuration includes installation of the Siebel Data Warehouse. The installer you use is based on the product you have purchased.

NOTE: Even if you plan to install only the Siebel Data Warehouse, you still must run the Siebel Analytics installer.

The sequence of chapters in general follows the installation sequence. Within this general framework, some sections describe how to install on specific platforms (Windows or UNIX) and some sections describe how to configure or reconfigure certain components (Scheduler).

Accordingly, this book is organized in the following manner:

- Chapters 1 through 6, plus appendices A and B.

Installation and configuration of all forms of the product: stand-alone Siebel Analytics Server, Siebel Analytics integrated with Siebel operational applications, Disconnected Analytics Client, the Siebel Data Warehouse, and configuration for internationalization.

NOTE: For the Siebel Data Warehouse installation, you must also refer to *Siebel Data Warehouse Installation and Administration Guide*. Throughout this book the Siebel Data Warehouse may also be referred to as the Siebel Relationship Management Warehouse.

- Chapters 7 through 9, plus Appendix C.

Configuration of Siebel Analytics integrated with Siebel operational applications (Siebel eBusiness Applications and Siebel Industry Applications), including additional authentication and security considerations for analytical applications.

- Chapter 10, “Siebel eBusiness Applications Metadata,” and Chapter 11, “Siebel Industry Applications Analytics Metadata,” plus Appendix C.

A discussion of the metadata used by Siebel Analytics applications integrated with operational applications (Siebel eBusiness Applications and Siebel Industry Applications), and how to perform configurations of that metadata for special purposes.

Analytics Applications Installation Prerequisites

Before installing Siebel Analytics, you should have done the following prerequisite steps:

- Installed the Siebel operational application.

For example, before installing Siebel Sales Analytics, you should have installed Siebel Sales.

- Installed the Siebel Data Warehouse.

The Siebel Data Warehouse itself has several prerequisites, including creation of the data warehouse, installation of Informatica servers, and setup of the Java environment. For details, see *Siebel Data Warehouse Installation and Administration Guide*.

Siebel Analytics Installation Options

This section summarizes the types of installation you may perform (based on your product licensing).

[Table 1](#) summarizes the main tasks required to install on each platform configuration.

Table 1. Siebel Analytics Installation Tasks by Licensed Platform

| Platform Type | Major Tasks |
|---|--|
| <ul style="list-style-type: none"> ■ Windows: Stand-Alone Siebel Analytics | Check installation prerequisites: <ul style="list-style-type: none"> ■ Permissions ■ Client/Server communication ■ IIS ■ MDAC ■ License key |
| | MDAC installation |
| | If IIS is the desired Web Server, install it |
| | Run Analytics Installer |
| | (No Siebel Data Warehouse setup) |
| | Restart machine |
| | Configure Siebel Analytics Scheduler |
| | Create and configure Siebel Analytics tables |
| | Configure Siebel Analytics for Apache Tomcat Server |
| | Install cluster server, if desired |

Table 1. Siebel Analytics Installation Tasks by Licensed Platform

| Platform Type | Major Tasks |
|--|---|
| <ul style="list-style-type: none"> ■ Windows: Siebel Analytics Applications (integrated with Siebel operational applications) | <p>Check installation prerequisites:</p> <ul style="list-style-type: none"> ■ Permissions ■ Client/Server communication ■ IIS ■ MDAC ■ License key <hr/> <p>Install Siebel operational application</p> <hr/> <p>Install the Siebel Data Warehouse</p> <hr/> <p>MDAC installation</p> <hr/> <p>If IIS is the desired Web Server, install it</p> <hr/> <p>Run Siebel Analytics Installer</p> <hr/> <p>Restart machine</p> <hr/> <p>Run Data Warehouse Application Console (DAC) to set up Siebel Data Warehouse</p> <hr/> <p>Update seed data, if necessary</p> <hr/> <p>Install cluster server, if desired</p> <hr/> <p>Access Siebel Analytics options</p> <hr/> <p>Change database connections</p> <hr/> <p>Create a dedicated repository</p> <hr/> <p>Initialize the Siebel operational application with Siebel Analytics</p> <hr/> <p>Configure authentication and security settings</p> <hr/> <p>Other Siebel operational applications configuration</p> <hr/> <p>Install Disconnected Client and Briefing Book Reader, if desired</p> |

Table 1. Siebel Analytics Installation Tasks by Licensed Platform

| Platform Type | Major Tasks |
|--|---|
| <ul style="list-style-type: none"> ■ UNIX: Stand-Alone Siebel Analytics | Installing Siebel Analytics Server: Run UNIX installation script |
| | Change environment variables |
| | Test Siebel Analytics Server installation |
| | Create and configure Siebel Analytics tables |
| | Configure Siebel Analytics Scheduler |
| | Update Scheduler configuration |
| | Post-installation changes for specific UNIX platforms |
| | Installing Siebel Analytics Web: |
| | Install Siebel Analytics Web Components |
| | Install and configure Internet Information Server |
| | Configure Siebel Analytics Server |
| | Configure Siebel Analytics Web |
| | Insert Siebel Analytics Web license keys |
| | Install or upgrade Siebel Analytics Web Catalog |

Table 1. Siebel Analytics Installation Tasks by Licensed Platform

| Platform Type | Major Tasks |
|---|---|
| <ul style="list-style-type: none">■ UNIX: Siebel Analytics Applications (integrated with Siebel operational applications) | <p>Same as for Stand-Alone on UNIX, plus the following:</p> <hr/> <p>Install the following components on a Windows machine:</p> <ul style="list-style-type: none">■ Siebel Analytics Server Administration Tool (required)■ Siebel Analytics Catalog Manager (optional)■ Siebel Analytics test client (optional)■ Siebel Disconnected Analytics Application Manager (required if you purchased Siebel Disconnected Analytics)■ DAC Client (for applications) <hr/> <p>Generate the repository file (SiebelAnalytics.rpd) from a machine running Windows</p> <hr/> <p>Set up Siebel Data Warehouse from a machine running Windows</p> <hr/> <p>Note that the repository and Siebel Data Warehouse are created and manipulated on a Windows machine and ported to the UNIX machine.</p> |

About Siebel Product Modules and Options

This guide contains descriptions of modules that are optional and for which you may not have purchased a license. The Siebel Sample Database also includes data related to these optional modules. As a result, your software implementation may differ from descriptions in the *Siebel Bookshelf*. To find out more about the modules your organization has purchased, see your corporate purchasing agent or your Siebel sales representative.

Revision History

Siebel Analytics Installation and Configuration Guide

Version 7.7, Rev. A

Table 2. New Product Features in *Siebel Analytics Installation and Configuration Guide*, Version 7.7, Rev. A

| Topic | Revision |
|---|--|
| “Requirements for Installing Siebel Analytics on Windows Platforms” on page 28 | Revised the following sections: <ul style="list-style-type: none"> ■ Prerequisites for installation on Windows platform ■ Other prerequisites for installation ■ Configuring Microsoft Internet Information Server (IIS) ■ Installation of the Microsoft Data Access Components (MDAC) |
| “Installing Siebel Analytics on Separate Machines Under Windows” on page 44 | Added this procedure. |
| “Process of Creating and Configuring Scheduler Tables (Stand-Alone on Windows)” on page 46 | Revised the following sections: <ul style="list-style-type: none"> ■ Configuring Siebel Analytics Scheduler ■ Database and Table information |
| “Configuring Siebel Analytics for Apache Tomcat Server (Stand-Alone on Windows)” on page 53 | Revised the sections on installing and configuring Apache Tomcat Server and testing the Tomcat Server. |
| “Installation Prerequisites—All UNIX Platforms” on page 60 | Revised the section on UNIX prerequisites for installation and the steps for uninstalling Siebel Analytics. |
| “Post-Installation Tasks for UNIX Platforms” on page 83 | Revised the section on the Database Setup Script and the steps to test the Siebel Analytics Server installation procedure. |
| “Process of Installing Siebel Analytics Web on UNIX Platforms” on page 88 | Revised the sections on configuring Siebel Analytics for Apache Tomcat Server and setting up a Scratch Directory. |

Table 2. New Product Features in *Siebel Analytics Installation and Configuration Guide*, Version 7.7, Rev. A

| Topic | Revision |
|---|--|
| “Scripts for Basic Siebel Analytics Server Settings” on page 102 | Revised the sections on scripts for the standard and C shell. |
| “Process of Creating and Configuring Scheduler Tables (Stand-Alone on UNIX)” on page 106 | Revised the sections on creating databases and tables for the relational database and starting and shutting down the Scheduler process in UNIX. |
| “Process of Configuring Native Databases on Siebel Analytics Server” on page 112 | Revised the section on configuring new installation on UNIX platforms. |
| “Process of Clustered Server, Clustered Client, and Cluster Controller Configuration” on page 126 | Revised the sections on configuring clustered servers and cluster controllers, example of a clustering DSN in the odbc.ini file, and clustered ODBC. |
| “Using an Older Repository While Upgrading the Siebel Analytics Platform” on page 168 | Added this section. |
| “Disabling the eFinance Logical Table Sources” on page 243 | Revised the procedure for updating the Logical Tables sources. |
| “Parameters in the Configuration File-Cache Section” on page 275 | Specified the maximum storage capacity as 4 gigabytes in the DATA_STORAGE_PATHS parameter section. |

Version 7.7**Table 3. New Product Features in *Siebel Analytics Installation and Configuration Guide*, Version 7.7**

| Topic | Revision |
|--|--|
| “Installing the Siebel Analytics Disconnected Client” on page 131 | Instructions on how to install the Disconnected Analytics client on mobile users’ laptops. |
| “Process of Running the Siebel Analytics Installer on Windows Platforms” on page 35 and “Process of Installing Siebel Analytics Components On UNIX” on page 62 | Installation wizard incorporates the Corda PopChart Server installation, and allows incremental installations as well as complete Siebel Analytics suite installation. |
| “Process of Installing Siebel Analytics Web on UNIX Platforms” on page 88 | Siebel Analytics Web now runs as a separate service, which makes changes to the Web Server start script unnecessary. |
| “About the Siebel Data Warehouse and the Data Warehouse Application Console” on page 56 | Instructions on how to install the new Data Warehouse Application Console, or DAC. |
| “About Siebel Analytics Applications Licensing” on page 227 and “Creating a Dedicated Siebel Analytics Repository” on page 180 | Information on Analytics applications licensing and how it relates to the Siebel Analytics repository. |
| “Installing Briefing Book Reader” on page 135 | Describes how to install Briefing Book Reader for offline review of saved dashboard content. |

Table 2 lists changes described in this version of the documentation to support version 7.7 of the software.

Table 4. New Product Features in *Siebel Analytics Installation and Configuration Guide, Version 7.7*

| Topic | Description |
|--|--|
| “Installing the Siebel Analytics Disconnected Client” on page 131 | Instructions on how to install the Disconnected Analytics client on mobile users’ laptops. |
| “Process of Running the Siebel Analytics Installer on Windows Platforms” on page 35 and “Process of Installing Siebel Analytics Components On UNIX” on page 62 | Installation wizard incorporates the Corda PopChart Server installation, and allows incremental installations as well as complete Siebel Analytics suite installation. |
| “Process of Installing Siebel Analytics Web on UNIX Platforms” on page 88 | Siebel Analytics Web now runs as a separate service, which makes changes to the Web Server start script unnecessary. |
| “About the Siebel Data Warehouse and the Data Warehouse Application Console” on page 56 | Instructions on how to install the new Data Warehouse Application Console, or DAC. |
| “Configuring Siebel Analytics for Apache Tomcat Server (Stand-Alone on Windows)” on page 53 | Instructions on how to install on Apache Tomcat under Windows. |
| “About Siebel Analytics Applications Licensing” on page 227 and “Creating a Dedicated Siebel Analytics Repository” on page 180 | Information on Analytics applications licensing and how it relates to the Siebel Analytics repository. |
| “Installing Briefing Book Reader” on page 135 | Describes how to install Briefing Book Reader for offline review of saved dashboard content. |

Related Siebel Analytics Documentation

To successfully install, configure, and maintain Siebel Analytics, consult the following documentation:

- *Siebel Data Warehouse Installation and Administration Guide*
- *Siebel Data Warehouse Data Model Reference*
- *Siebel Analytics Web Administration Guide*
- *Siebel Analytics Server Administration Guide*
- *Siebel Disconnected Analytics Online Help*
- *Siebel Analytics Scheduler Guide*
- *Siebel Tools Reference*

In addition, Informatica documentation is provided on the Siebel eBusiness Third-Party Bookshelf CD-ROM (shipped with the Siebel Bookshelf CD-ROM). This guide and *Siebel Data Warehouse Installation and Administration Guide* refer to those publications when necessary.

Installing Siebel Analytics Software in the Windows Environment

1

This chapter provides the steps to install the Siebel Analytics software in the Windows environment.

NOTE: Chapter 2, “Installing Siebel Analytics Software in the UNIX Environment” details instructions for installing the software in the UNIX environment. However, UNIX systems also must have some Windows-based components installed, such as the Siebel Analytics Server Administration Tool, Siebel Analytics Catalog Manager, and Data Warehouse Application Console (DAC) client. The Siebel Analytics Installation Wizard described in this section runs under Windows systems only. The third-party Informatica installer also runs under Windows systems only.

This chapter is organized into the following major sections:

- [“Requirements for Installing Siebel Analytics on Windows Platforms” on page 28](#)
- [“Configuring Microsoft Internet Information Server \(IIS\) for Siebel Analytics” on page 30](#)
- [“Process of Running the Siebel Analytics Installer on Windows Platforms” on page 35](#)
- [“About the Siebel Data Warehouse and the Data Warehouse Application Console” on page 56](#)
- [“About Siebel Analytics Executable Files” on page 57](#)

NOTE: For hardware and software requirements for the Siebel Analytics software and for clients connecting to Siebel Analytics, see the *Siebel System Requirements and Supported Platforms*.

Requirements for Installing Siebel Analytics on Windows Platforms

This section contains background information you need to know and tasks you need to perform before you install Siebel Analytics. It contains the following topics:

- [“Checking Permissions Settings for Installation Folders” on page 28](#)
- [“Checking Siebel Analytics Server Client/Server Communication” on page 29](#)
- [“Other Prerequisites for Installing on Windows Platforms” on page 29](#)
- [“Configuring Microsoft Internet Information Server \(IIS\) for Siebel Analytics” on page 30](#)
- [“Installing the Microsoft Data Access Components \(MDAC\)” on page 32](#)
- [“Removing or Upgrading Siebel Analytics Software on Windows” on page 33](#)

Checking Permissions Settings for Installation Folders

On Windows platforms, the directory in which Siebel Analytics is installed and the location chosen for the Siebel Analytics temporary data directory both need to have the permission settings set to Change/Full Control for the Microsoft Internet Information Service (IIS) domain user account that Siebel Analytics Web will run under. This is generally the default user `IUSR_machinename`. You can verify these settings, and change them if required, from the Security tab on the Windows Properties dialog box.

To verify the Siebel Analytics Web permission settings

- 1** Access the Windows Properties dialog box from Windows Explorer.
- 2** Right-click on the directory.

For example, `D:\SiebelAnalytics`, or `D:\SiebelAnalyticsData`, or `D:\Program Files\SiebelAnalytics`.

- 3** Choose Properties.
- 4** Click the Security tab to see the settings.

- 5 Make any required changes. Click Apply.
- 6 Click OK to exit.

Checking Siebel Analytics Server Client/Server Communication

The default client/server communication method for Siebel Analytics Server is TCP/IP. To support this method, a Port field has been added to the Enter Logon Information screen in Siebel Analytics ODBC Wizard, and two parameters have been added to the Server section in the NQSConfig.INI file. For information about the new parameters in the configuration file, see [“CLIENT_MGMT_THREADS_MAX” on page 295](#) and [“RPC_SERVICE_OR_PORT” on page 295](#). Siebel Analytics DCOM support is limited; it is recommended that you use TCP/IP by default. If you have an existing installation, modify it according to the following procedure.

To change the default Siebel Analytics Server client/server communication method

- 1 Remove the system environment variable NQUIRE_DCOM.
- 2 Close any open ODBC sessions and reopen the ODBC wizard to make changes.

For more information about using Siebel Analytics ODBC Wizard, see *Siebel Analytics Server Administration Guide*.

NOTE: The Siebel Analytics Server service needs to be started before you use the Siebel Analytics Server Administration Tool to open a repository in online mode. Opening a repository in online mode will not cause the service to start automatically, as it did in previous versions.

Other Prerequisites for Installing on Windows Platforms

- You must have a Web Server installed before installing Siebel Analytics Web.
 - If IIS is the desired Web Server, see [“Configuring Microsoft Internet Information Server \(IIS\) for Siebel Analytics” on page 30](#).
- The following tasks may need to be performed before you run the Siebel Analytics installer:

- [“Configuring Microsoft Internet Information Server \(IIS\) for Siebel Analytics” on page 30](#)

Use this procedure to add or change IIS components.

- [“Installing the Microsoft Data Access Components \(MDAC\)” on page 32](#)

If MDAC is not on your system, use this procedure.

- [“Removing or Upgrading Siebel Analytics Software on Windows” on page 33](#)

If you have an older version of Siebel Analytics and are installing a newer version, uninstall the old version before installing the new version.

Configuring Microsoft Internet Information Server (IIS) for Siebel Analytics

If you are required to change the settings for Internet Information Server for your Siebel Analytics installation, perform the procedure in this section.

NOTE: If IIS is not already installed on your system, refer to Microsoft documentation for the latest information on how to install the version of IIS required for your operating system.

To add or change IIS components

- 1** Start Internet Services Manager.
- 2** From the Microsoft Management Console, select the Default Web Site icon. Right-click and choose New > Virtual Directory.
- 3** In the New Virtual Directory Wizard, as the name for the alias to be used to access the Siebel Answers application, enter analytics, and then click Next.
- 4** Use the Browse button to navigate to the directory in which the Siebel Analytics Web components are installed.
- 5** Select the following options, then click Finish:
 - Allow Read Access

- Allow Script Access
 - Allow Execute Access
- 6** Select the newly created Siebel Analytics Web script icon, and then right-click and choose Properties.
- a** On the Directory Security tab, click Edit in the Enable anonymous access to edit the authentication methods area. This opens the Authentication Methods dialog box.
 - b** Make sure the option Integrated Windows Authentication is *not* selected.
 - c** (Optional) Click Browse and select a user that has access to the network and click OK.

In most cases, the default user IUSR_ *machinename* is sufficient, but you may need to enter a domain account with more network privileges. This account needs full access to both the Siebel Analytics installation directory and the Siebel Analytics temporary data directory, as described in the section [“Checking Permissions Settings for Installation Folders” on page 28](#).

NOTE: When configuring the Siebel Analytics Web component on Windows 2000, the anonymous user account specified must have Read and Write access to the Siebel Analytics directory. Write access is required to access Siebel Analytics Server through ODBC.

- d** Select the option Allow IIS to control password and click OK.
- 7** Click OK successively until you exit to the Microsoft Management Console, and then close the console.

NOTE: The user IUSR_ *machinename* must match the true name of the machine being used. Servers that have been installed from a mirror image, and with IIS pre-installed, typically do not meet this condition. Because IUSR_ *machinename* is created during the IIS installation process, the only remedy is for the administrator to uninstall and reinstall IIS.

Installing the Microsoft Data Access Components (MDAC)

Before installing any Siebel Analytics components (Siebel Analytics Administration, Siebel Analytics Scheduler, or Siebel Analytics Server) on Windows platforms, Microsoft Data Access Components (MDAC) must be installed. MDAC is considered a Windows system component and is included with many applications, so MDAC may already be installed. If you are installing the Siebel Analytics Cluster Server feature, you do not need MDAC on machines that will host only Cluster Controllers.

NOTE: If you do not need to install MDAC now, continue with [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment.”](#)

Use the following procedure to determine if the appropriate version of MDAC is already installed. If it is not installed, complete the MDAC installation before beginning the Siebel Analytics installation. For the appropriate version to use, see *Siebel System Requirements and Supported Platforms*.

To check for an existing installation of Microsoft Data Access Components

- 1 Search for the files msdadc.dll and oledb32.dll (optional).

These files are generally located in the C:\Program Files\Common Files\System\OLE DB folder.

- 2 When you locate the files, right-click and select Properties from the context-sensitive menu. The version information is shown on the Version tab.

If the version is not the one specified in *Siebel System Requirements and Supported Platforms*, you need to install MDAC. Use the following procedure.

NOTE: Refer to the Microsoft Web site for further instructions or if you encounter any problems during installation.

To install Microsoft Data Access Components

- 1 Point your browser to the Microsoft Web site.

In the Search box, type the words *MDAC download* and press Enter.

- 2 Navigate to and select the one that conforms with the type specified in *Siebel System Requirements and Supported Platforms*.

Click Download.

- 3 After the program has downloaded, locate `mdac_typ.exe` and click it.

This starts the MDAC installer.

- 4 Follow the prompts to complete the MDAC installation.

When you are finished, continue with [“Removing or Upgrading Siebel Analytics Software on Windows.”](#)

Determining License Key Information

You should know the installation components allowed by your Siebel Analytics licenses and should determine the values for each of the installation options *before* beginning any installation.

About Authentication and Security Settings

Refer to [Chapter 5, “Siebel Analytics User Authentication and Security Setup.”](#)

Removing or Upgrading Siebel Analytics Software on Windows

If you are reinstalling Siebel Analytics, or installing a newer version of Siebel Analytics software, you must first uninstall the current version before proceeding with the installation. This section describes how to uninstall an earlier installed version of Siebel Analytics.

Before removing or upgrading any Siebel Analytics software, follow these precautions:

- Make backups of the Web Catalog, repository (.rpd), and the instanceconfig.xml, DBFeatures.INI, NQSConfig.INI, and NQClusterConfig.INI files and move them to a temporary location. The uninstaller offers the option of deleting or keeping them, but it is recommended that you back up these files.

NOTE: The DBFeatures.INI, NQSConfig.INI, and NQClusterConfig.INI files for Windows are located at `$INSTALLDIR\Config`. The instanceconfig.xml file for Windows is located at `$INSTALLDIRData\Web\config`.

- If you are upgrading the software, the newer version will not start using the older version's configuration file. It is recommended that you back up and store your old NQSConfig.INI file for reference.

To remove an existing installation of Siebel Analytics software

1 Stop the following services (from Start > Settings > Control Panel > Services):

- Siebel Analytics Server
- Siebel Analytics Scheduler
- Siebel Analytics Cluster Server
- IIS Admin Service (Microsoft Internet Information Server), and any additional services it stops
- World Wide Web Publishing Service

2 Using the Add/Remove Programs feature, uninstall Siebel Analytics.

You will be asked if you want to keep your existing .rpd and .ini files.

- Choosing Yes keeps the existing .rpd files (repository) and .ini files (configuration) and appends the extension `.old` to them.

- Choosing No causes the existing files to be replaced.

NOTE: If you uninstall Siebel Analytics, you also uninstall the Corda image server product. However, not all of the image server files are removed, and the directory structure is left behind. Manually delete these files and the directories. Do not use the Windows Add or Remove Programs utility.

Process of Running the Siebel Analytics Installer on Windows Platforms

This section explains how to install the Siebel Analytics software. This section contains the following topics:

- [“About the Siebel Analytics Installation Wizard for Windows” on page 35](#)
- [“Running the Siebel Analytics Installation Wizard Under Windows” on page 38](#)
- [“Initializing the Siebel Analytics Installation” on page 44](#)

About the Siebel Analytics Installation Wizard for Windows

The Siebel Analytics installation wizard can be used to install more than one type of Siebel Analytics. The type of installation you choose depends on what you are installing:

- Stand-Alone Siebel Analytics or Integrated Siebel Analytics, as summarized in the table [“Siebel Analytics Installation Tasks by Licensed Platform” on page 17](#).
- The complete Siebel Analytics suite, or only part of it, as shown in [Table 5](#).
- Siebel Data Warehouse, installed only if you are licensed for Siebel Analytics Applications. The Siebel Data Warehouse is configured using the Data Warehouse Application Console (DAC). See *Siebel Data Warehouse Installation and Administration Guide*.
- The Siebel Analytics Disconnected Client.

Further considerations for installing Siebel Analytics Disconnected Client:

Installing Siebel Analytics Software in the Windows Environment

Process of Running the Siebel Analytics Installer on Windows Platforms

- Siebel Analytics Disconnected Client cannot be installed at the same time as Siebel Analytics. You must perform two separate installations.
- Siebel Analytics Disconnected Client cannot be installed on the same machine with Siebel Analytics. You must install them on two separate machines.
- For installing Siebel Analytics Disconnected Client only, see [Chapter 4, “Installing the Disconnected Analytics Client and Briefing Book Reader.”](#)

NOTE: If you already have installed one or more Siebel Analytics components, running the installer wizard again to install additional components causes a warning message to be displayed, stating that you may continue to install features, but that reinstalling may overwrite any patches that you have installed.

[Table 5](#) shows the Siebel Analytics components installed with each installation option. See also the [“Notes on Your Installer Choices”](#) on [page 37](#).

Table 5. Siebel Analytics Installation Options

| Installation Option | Components Installed | Additional Components Installed for Analytics Applications |
|-----------------------------|---|--|
| Complete | <ul style="list-style-type: none">■ All the following components | All the following components |
| Siebel Analytics Server | <ul style="list-style-type: none">■ Siebel Analytics Server■ Siebel Analytics Clustering Server■ Siebel Analytics Scheduler■ Siebel Analytics Server Administration Tool | <ul style="list-style-type: none">■ Seed data■ Seed file programs (dataimp.exe) |
| Siebel Analytics Web Server | <ul style="list-style-type: none">■ Siebel Analytics Web■ Siebel Analytics Web Proxy■ Siebel Analytics Catalog Manager■ Corda PopChart Image Server | <ul style="list-style-type: none">■ SiebelAnalytics.webcat |

Table 5. Siebel Analytics Installation Options

| Installation Option | Components Installed | Additional Components Installed for Analytics Applications |
|---|--|---|
| Siebel Analytics Client Tools | <ul style="list-style-type: none"> ■ Siebel Analytics Client (nqcmd.exe and nqclient.exe) ■ Siebel Analytics ODBC Driver ■ Siebel Analytics Catalog Manager ■ Siebel Analytics Server Administration Tool | SiebelAnalytics.rpd (with Analytics applications) |
| Disconnected Client (This option appears only if you have a license for Disconnected Analytics.) | <ul style="list-style-type: none"> ■ Local version of the Siebel Analytics Server ■ Siebel Disconnected Analytics Application Manager ■ Siebel Disconnected Analytics Client ■ Siebel Disconnected Analytics Web | None. (For Siebel ePharma, Disconnected applications components are installed on the Siebel Analytics Server.) |
| Data Warehouse (Not applicable for the Stand-Alone version of Siebel Analytics.) | (Siebel Analytics applications only) <ul style="list-style-type: none"> ■ Siebel Data Warehouse ■ Data Warehouse Application Console Server ■ Data Warehouse Application Console (DAC) Client | (Siebel Analytics applications only) <ul style="list-style-type: none"> ■ Siebel Information Files (.sif) ■ Appropriate Informatica repository ■ Seed data |

Notes on Your Installer Choices

- The installation choices that appear in the installer are limited by the license file you use. Some components, such as Siebel Analytics Disconnected Client, do not appear as choices during the installation *unless* you have the appropriate license.

- If you have purchased a Siebel Analytics application, the Siebel Analytics repository (.rpd) file will be generated based on the license keys for that application. See [Chapter 10, “Siebel Analytical Applications Metadata,”](#) for more information about application licensing.
- If you are planning to install Siebel Analytics Web Server and Siebel Analytics Server on separate machines, follow the procedures shown in [“Installing Siebel Analytics on Separate Machines Under Windows”](#) on page 44.
- If you are choosing to install *only* the Siebel Data Warehouse, see [“About the Siebel Data Warehouse and the Data Warehouse Application Console”](#) on page 56 and *Siebel Data Warehouse Installation and Administration Guide*.
- If you plan to install the Siebel Analytics Cluster Server feature, first read [Chapter 3, “Installing the Siebel Analytics Cluster Server Feature.”](#)
- If you plan to install the Siebel Analytics Disconnected Client, it must be installed on a separate machine from the Siebel Analytics Server installation. See [Chapter 4, “Installing the Disconnected Analytics Client and Briefing Book Reader.”](#)

This Client installation can be configured by the Administrator so it would be invisible to the end user. See the information on setting up Disconnected Analytics in *Siebel Analytics Server Administration Guide*.

Running the Siebel Analytics Installation Wizard Under Windows

The Siebel Analytics software uses a standard Windows installation program (setup.exe) for installation.

CAUTION: If you reinstall the Siebel Analytics software in the same location as a previous installation, make sure that the installation folder and the data folder are not shared.

In general, the process of installing the Siebel Analytics software in Windows consists of:

- Locating the installation software (either CD or network) and license files.
- Running the setup.exe file.

- Responding to installer wizard prompts for Siebel Analytics and for Siebel Data Warehouse.
- Rebooting the computer.

CAUTION: Make sure you have uninstalled any previous installations of Siebel Analytics. See [“Removing or Upgrading Siebel Analytics Software on Windows”](#) on page 33.

To run the Siebel Analytics installation wizard under Windows

- 1 Access the installation files, and then run the program `setup.exe`.
- 2 The installation wizard window appears and prompts you through each screen. To continue to the next screen, click Next. To return to a previous screen, click Back.

| Screen | Your Action |
|--------------------------|--|
| Welcome | Click Next. |
| License Agreement | Select “I accept...” and click Next. |
| License File | <p>The License file is an XML file corresponding to the installation type you are licensed for. This file is emailed to you, or installed on your corporate server.</p> <p>Select the appropriate XML file in the License File screen. Click Next.</p> <p>For more information about application licensing, see “About Siebel Analytics Applications Licensing” on page 227.</p> |
| Installation Directories | <p>To accept the default installation (to the C:\ drive), click Next.</p> <p>To change the default (recommended), click browse and establish the installation path, then click Next.</p> |

| Screen | Your Action |
|------------|---|
| Setup Type | <p>The typical choices are:</p> <hr/> <p>Complete Suite (all of the following)</p> <p>Siebel Analytics Server</p> <ul style="list-style-type: none">■ Siebel Analytics Server■ Siebel Analytics Server Administration Tool■ Siebel Analytics Clustering Server■ Siebel Analytics Scheduler <p>Siebel Analytics Web Server</p> <ul style="list-style-type: none">■ Siebel Analytics Web (including Corda PopChart)■ Siebel Analytics Web Proxy■ Siebel Analytics Catalog Manager <p>Siebel Analytics Client Tools</p> <ul style="list-style-type: none">■ Siebel Analytics Clients (nqcmd.exe and nqclient.exe)■ Siebel Analytics ODBC Driver■ Siebel Analytics Catalog Manager■ Siebel Analytics Server Administration Tool <p>Data Warehouse</p> <ul style="list-style-type: none">■ Siebel Data Warehouse■ Data Warehouse Application Console <p>Custom (only for use by experienced Administrators)</p> <hr/> <p>Note that the setup type you choose affects the number and type of screens that subsequently appear. See “Notes on Your Installer Choices” on page 37.</p> <p>For the purpose of this procedure, it is assumed that you have selected Complete Suite.</p> <p>Click Next.</p> |

Installing Siebel Analytics Software in the Windows Environment

Process of Running the Siebel Analytics Installer on Windows Platforms

| Screen | Your Action |
|---------------------------------------|--|
| Prerequisite Check | <p>Select one or more database clients to be used to connect the Siebel Analytics Server to the relational database.</p> <p>The choices are:</p> <ul style="list-style-type: none">■ Microsoft SQL Server■ IBM DB2 Client■ Oracle Client <p>Click Next.</p> |
| Service Start Type | <p>Choose whether these Siebel Analytics Services will start automatically at machine startup time, or will need to be started manually:</p> <ul style="list-style-type: none">■ Analytics Server (default is Automatic)■ Analytics Scheduler (default is Manual)■ Analytics Cluster (default is Manual)■ Analytics Web (default is Automatic) <p>Click Next.</p> |
| Selection Error Message Language | <p>The error messages from the Siebel Analytics Server are in one language only. Typically, these are relational server-side messages only.</p> <p>The Siebel Analytics Administrator can choose which language to display these messages in. The default is English. Click Next.</p> |
| Cache Size | <p>Choose the disk space to be allotted to the Siebel Analytics Server cache. Accept the cache size of 256 MB or enter a different size. (The size can be changed later in the NQSConfig.INI file.) Click Next.</p> |
| Analytics Cluster Server Account Name | <p>The Windows server account name that each of the servers should run under. This account name should be the same on all clustered servers.</p> <p>Accept the default (LocalSystem), or specify the account name (in the format domain\user) and the password. Click Next.</p> |

Installing Siebel Analytics Software in the Windows Environment

Process of Running the Siebel Analytics Installer on Windows Platforms

| Screen | Your Action |
|---|---|
| Scheduler Server Name | The default is the name of the machine on which Analytics Scheduler is being installed. If the Scheduler will run on the same machine as the Analytics Web Server, leave this field blank. Click Next. |
| Siebel Data Warehouse Components | Choose any or all of the following components: <ul style="list-style-type: none">■ Application Console Server■ Application Console Client■ Application Console Client Utilities Click Next. Note that selecting these components requires that Java SDK 1.4.1 or higher be installed on your installation machine. |
| Wait | Placeholder screen appearing while the installer accepts all the choices you have made. Click Next. |
| Summary Information (pre-installation) | A list of all the features you have chosen, and the directory where they will be installed. You should read this information to confirm it is correct. Click Next. |
| Installing | Placeholder screen that appears while the installer installs all the features you have selected. Click Next when done. |
| Summary Information (post-installation) | Acknowledgement that the installation wizard has finished installing Siebel Analytics. Click Next. |
| Restart Computer | Choose whether or not to immediately restart your computer and click Finish. If you click Yes, the computer will shut down and restart. If you click No, you will need to restart the computer before you use Siebel Analytics. |

NOTE: If you are installing Siebel Analytics applications, the repository is created according to the application you have purchased. See [“About Siebel Analytics Applications Licensing”](#) on page 227.

3 Proceed to [“Initializing the Siebel Analytics Installation.”](#)

Initializing the Siebel Analytics Installation

After the Installation Wizard has ended, you must restart your computer in order for the installation to take effect, before using the Siebel Analytics software. If you did not select Yes at the installation prompt, you must restart the computer now.

Installing Siebel Analytics on Separate Machines Under Windows

Use these procedures to install Siebel Analytics Web Server and Siebel Analytics Server on separate machines. Some steps that are done automatically when installing on a single machine, such as creating a DSN, must be done manually here.

Installing Siebel Analytics on a Windows Web Server Machine

This task is part of the the process of installing Siebel Analytics Web Server and Siebel Analytics Server on separate machines.

To install Siebel Analytics on the Web Server machine

- 1 When running Siebel Analytics installer, select the Siebel Analytics Web Server installation option.

This will install the Siebel Analytics Web Server, Siebel Analytics Catalog Manager, and ODBC driver files.

- 2 Create a system DSN called Analytics Web.

The Analytics Web DSN accesses the repository using a single Siebel Analytics Server data source name.

- 3 Configure the Analytics Web DSN to point to the second machine where the Siebel Analytics Server is installed.
- 4 Make sure that the current Web Catalog file and any custom XML files are in the Catalog directory on the Web machine.
- 5 Install the Corda Popchart server on the Web machine.
- 6 Make sure that the Siebel Analytics Web service is running.

Proceed to [“Installing Siebel Analytics on a Windows Siebel Analytics Server Machine”](#) on page 45.

Installing Siebel Analytics on a Windows Siebel Analytics Server Machine

This task continues the process of installing Siebel Analytics Web Server and Siebel Analytics Server on separate machines, begun in [“Installing Siebel Analytics on a Windows Web Server Machine”](#) on page 44.

To install Siebel Analytics on the Siebel Analytics Server machine

- 1 When running Siebel Analytics installer, select the Siebel Analytics Server installation option.

NOTE: It is also possible to choose the Complete installation and not make use of the Web components on this machine.

- 2 Make sure that the correct Repository file and the data sources to connect to the physical DBMS are on the Siebel Analytics Server machine.
- 3 Make sure that the Siebel Analytics Server service is running.

Post-Installation Tasks For Siebel Analytics

There are a number of tasks you must complete after the Siebel Analytics Installation Wizard is finished. You may need to configure your installation further. The number of post-installation configuration tasks you must complete depends on the types of installation options you have chosen, the number and types of platforms you are using, and the complexity of your physical setup. For example, if you are installing only Siebel Analytics Stand-Alone, you have less post-installation configuration to perform than if you are installing a Siebel Analytics Industry Application with a Siebel Data Warehouse, with several localized languages.

This section contains the following topics:

- [“Process of Creating and Configuring Scheduler Tables \(Stand-Alone on Windows\)”](#) on page 46
- [“Creating Databases and Tables for the Siebel Analytics Scheduler”](#) on page 48
- [“Configuring Siebel Analytics Scheduler”](#) on page 50

- [“Changing the Account Under Which a Windows Service Runs” on page 50](#)
- [“Configuring IBM DB2 Connect for Queries on Siebel Analytics Server” on page 52](#)
- [“Checking the Siebel Analytics Installation Log Files on Windows” on page 55](#)
- [“About the Siebel Data Warehouse and the Data Warehouse Application Console” on page 56](#)
- [“About Siebel Analytics Executable Files” on page 57](#)

Process of Creating and Configuring Scheduler Tables (Stand-Alone on Windows)

This section is for sites that are running Stand-Alone Siebel Analytics and using Siebel Analytics Scheduler. It describes the relational database tables required by Siebel Analytics Scheduler and explains how to create them.

NOTE: If you are running Siebel Analytics applications, you do not have to manually create the relational database tables.

About Configuring Siebel Analytics Scheduler on Windows

Siebel Analytics Scheduler runs as a process. You set Scheduler configuration options in `schconfig.exe`, a console-based application located in the `$INSTALLDIR`.

About Siebel Analytics Scheduler Tables

This section gives brief descriptions of the database tables used by Siebel Analytics Scheduler. If you are not using Siebel Analytics Scheduler, you do not need the information in this section.

NOTE: For Siebel Analytics applications, the Scheduler tables were created during the installation of Siebel 7.0.x and 7.5.x operational applications. Siebel Analytics 7.7 uses updated Scheduler tables. These updates are delivered as .sif files that must be applied by your Siebel Administrator. For procedures on applying .sif files, see *Siebel Data Warehouse Installation and Administration Guide*.

■ S_NQ_ACCT

Siebel Analytics Server generates Usage Tracking data files (if usage tracking is enabled in NQSConfig.ini). A sample JavaScript has been bundled with the Siebel Analytics Server software that extracts information from the Usage Tracking files and loads them to a table in the relational database. The S_NQ_ACCT table stores all the information regarding Accounting Data.

■ S_NQ_JOB

The Siebel Analytics Scheduler requires a relational database table to store information regarding the scheduled jobs. The S_NQ_JOB table stores this information.

■ S_NQ_INSTANCE

The Siebel Analytics Scheduler requires a relational database table to store information regarding the instances of the scheduled jobs. The S_NQ_INSTANCE table stores information pertaining to job instances.

■ S_NQ_ERR_MSG

This table stores error messages for Siebel Analytics Scheduler job instances that do not complete successfully.

■ S_NQ_JOB_PARAM

This table holds information about Siebel Analytics Scheduler job parameters for scheduled jobs.

You can either create a new database to store the tables or use an existing one. After you have created a database, create the Scheduler tables by executing SAJOBS.xxx.sql (where xxx is the database type). If you are using usage statistics, create the table in SAACCT.xxx.sql.

About Database Support in the Siebel Analytics Scheduler

The Scheduler works with all the supported databases for Siebel Analytics. For the complete list of supported databases, see *Siebel System Requirements and Supported Platforms*.

Creating Databases and Tables for the Siebel Analytics Scheduler

There is a one-to-one relationship between the relational database and the Scheduler. Therefore, the following conditions must be met:

- The Scheduler needs to be configured to use a database, and the database must be available for use, before the Scheduler service will start.
- Do not configure multiple Siebel Analytics Scheduler services to use a single database.

You can either create a new database in which to store the tables or use an existing database.

NOTE: Before you create a database and tables, you must have an administrative sign-on account.

To create a database and tables for use by the Scheduler

- 1** Make sure that you have a valid administrative account to create a database and tables.
- 2** Create the database, or use an existing database.
- 3** Create the Scheduler tables by executing SAJOBS.xxx.sql (where xxx is the database type).

If you are using usage statistics, create the table in SAACCT.xxx.sql.

Creating Databases and Tables for the Relational Database

The following procedures describe how to create a database and tables for these relational databases:

- Microsoft SQL Server
- Oracle
- IBM DB2

To create a database and tables for Microsoft SQL Server

- 1 Create a database named S_NQ_SCHED using Enterprise Manager. Make sure that you have enough free disk space to accommodate Siebel Analytics Tables (a minimum of 500 MB for Siebel Analytics applications).
- 2 Using S_NQ_SCHED as the current database, use Query Analyzer to open the file SAJOBS.MSSQL.sql and execute it to create the Siebel Analytics Scheduler tables.
- 3 Open the file SAACCT.MSSQL.sql and execute it to create the Accounting table.

To create a database and tables for Oracle

- 1 Proceed in one of the two following ways:
 - Create a new database named S_NQ_SCHED, and create a user named S_NQ_SCHED.
 - In one of your existing databases, create a user named S_NQ_SCHED.
- 2 Provide your own password to the user S_NQ_SCHED.
- 3 Using the Oracle client configuration tool, create an Oracle Service to the current S_NQ_SCHED database with this user ID and password.
- 4 Using the SQL Worksheet, open the file SAJOBS.Oracle.sql and execute it to create Siebel Analytics Scheduler tables.
- 5 Open the file SAACCT.Oracle.sql and execute it to create the Accounting table.

To create a database and tables for IBM DB2

- 1 Create a database named S_NQ_SCHED with a valid user ID and password.

- 2 Using Command Center, open the file SAJOBS.DB2.sql and execute it to create Siebel Analytics Scheduler tables.
- 3 Open the file SAACCT.DB2.sql and execute it to create the Accounting table.

Configuring Siebel Analytics Scheduler

After you create the Siebel Analytics Scheduler tables, you must configure the Scheduler. In the Siebel Analytics Server Administration Tool, you set Scheduler configuration options in the Job Manager Configuration dialog box.

Once the Scheduler is successfully running, change the service to be an automatic startup. These tasks are described in *Siebel Analytics Scheduler Guide*.

Changing the Account Under Which a Windows Service Runs

In the Windows environment, the Siebel Analytics services run as Windows services. The Siebel Analytics Server service, for example, is initially configured to run as a local SYSTEM account, unless you are using the Siebel Analytics Cluster Server feature. If the service needs to access any remote machines, you must run it using a valid user ID and password with sufficient network privileges to access remote databases. This user ID must also have Windows Administrator privileges on the local machine.

To change the account under which a Windows service runs

- 1 On the machine in which Siebel Analytics is installed, select Start > Settings > Control Panel.
- 2 Open the Services applet by double-clicking the Services icon in the Control Panel.
- 3 Select the Siebel Analytics service and click Startup. The Service dialog box opens.
- 4 In the Log On As portion of the Services dialog box, select the option This Account and then click the button to the right of the text box. The Add User dialog box opens.
- 5 Select the user account in which you want the service to run, click Add, and then click OK.

- 6 Enter the password for the user in the Services dialog box, confirm the password, and then click OK.

The service is now configured to run under the new account. The next time you start the service, it will attempt to use the new account to start up the service.

Changing the Siebel Analytics Default ASP Page

After you have installed Siebel Analytics, the browser may not load the default.asp page. Check the Windows Eventvwr system log for an entry that shows:

```
The server failed to load application '/LM/W3SVC/1/ROOT'. The error was 'The specified metadata was not found.'
```

If you have received this error message, you must perform the following procedure.

To change the Siebel Analytics default ASP page

- 1 Add the users IUSR_ADMINISTRATOR and IWAM_ADMINISTRATOR to the local administrators group on the Windows server.
- 2 Change the directory definition in Internet Services Manager for Analytics and AnalyticsRes.
 - a Under the Application Name parameter, choose Create.
 - b Accept the default name.
 - c Set the Application Protection parameter to Low (IIS Process).

Configuring IBM DB2 Connect for Queries on Siebel Analytics Server

IBM DB2 Connect does not support the option of automatically disconnecting when an application using it receives an interrupt request. If you are running a relational database that uses DB2 Connect workstation, then you must change the setting of the parameter `INTERRUPT_ENABLED`. This parameter must be set on any Siebel Analytics Server machine using DB2 as a data source.

NOTE: DB2 Connect must be installed on the Siebel Analytics Server box and the version used must match the version used by the DB2 instance being used as the data source.

To configure the `INTERRUPT_ENABLED` parameter

- 1 Configure a database alias to be used as the native CLI Data Source Name. For example, create a new database entry using DB2 Configuration Assistant.
- 2 Using the database alias created and the name of the actual target DB2 database, set the `INTERRUPT_ENABLED` parameter using the following syntax:

```
uncatalog dcs db local_dcsname

catalog dcs db local_dcsname as target_dbname parms
",,INTERRUPT_ENABLED"
```

where:

- `local_dcsname` represents the local name of the host or AS/400 database (database alias name).
- `target_dbname` represents the name of database on the host or AS/400 database system.

Example using OS390 DB2 instance:

```
uncatalog dcs db DB2_390

catalog dcs db DB2_390 as Q10B parms ",,INTERRUPT_ENABLED,,,,,"

catalog database DB2_390 as DB2_390 at node NDE1EF20
authentication dcs
```

Configuring Siebel Analytics for Apache Tomcat Server (Stand-Alone on Windows)

Apache Tomcat, a Java servlet engine and Java Server Pages processor, may be configured to work in conjunction with the Apache HTTP Server.

To configure Siebel Analytics Web on an Apache Tomcat Server, perform the following procedures:

- Install the required software. For the details of the installation process, refer to documentation for the Apache HTTP Server and Apache Tomcat software.

NOTE: The software for running Apache Tomcat under Windows is available over the Internet. Check *Siebel System Requirements and Supported Platforms* for necessary versions of the software. See [“About Installing Apache Tomcat Server on Windows.”](#)

- Install and configure Siebel Analytics on the Tomcat Web Server.
See [“Configuring the Apache Tomcat Web Server \(Stand-Alone on Windows\)” on page 54.](#)
- Test the Tomcat Web Server installation.
See [“Testing the Tomcat Web Server Installation” on page 54.](#)

About Installing Apache Tomcat Server on Windows

The Web Server software must be installed in the following order:

- Java 2 Software Development Kit (SDK).
Include the Java executable in the system PATH variable.
- The latest version of the Apache Web Server for Windows.
 - Make sure no Web Server uses identical port numbers (for example, port 80).
 - Check Services to see if World Wide Web Publishing Service is running. If it is, stop it and set the startup type to Manual.

- Install the Apache Web Server a path with short directory names and no spaces. For instance:

```
D:\apache\httpd
```

Do this so that the MS-DOS path name will be equivalent to the Windows file name.

- The Apache Tomcat servlet container and JSP environment.
 - Use a path with short directory names and no spaces. For instance:

```
D:\apache\tomcat
```

- Make sure the Apache Tomcat service is running.

Configuring the Apache Tomcat Web Server (Stand-Alone on Windows)

Stop the Apache Tomcat service before configuring the Web Server.

To configure Apache Tomcat Web Server (stand-alone on Windows)

- 1 Stop the Apache Tomcat service.
- 2 In the Tomcat `\conf` directory, open the file `server.xml` in a text editor. Locate the `<Host >` tag for the virtual host you wish Siebel Analytics Web to run under. A default installation of Tomcat 4.x has a single `<Host >` tag for the default host.
- 3 Modify the contents of this tag as follows:

```
<Context path="/analytics" docBase="$INSTALLDIR\Web\Servlet">
```

Replace `$INSTALLDIR` with the full path to the directory where Siebel Analytics has been installed.

- 4 Near the end of the Apache Web Server configuration file, insert a Tomcat configuration file reference. For example:

```
include "D:\apache\tomcat\conf\tomcat-apache.conf"
```

Testing the Tomcat Web Server Installation

Use the following procedure to test your configuration.

To test the Tomcat Web Server installation

- 1 Start the Tomcat service if it is not already running.
- 2 Open a Web browser and attempt to browse to the location where you have installed Analytics Web. For example:

```
http://localhost:8080/analytics
```

If you see a login page, you have successfully installed Analytics Web.

Checking the Siebel Analytics Installation Log Files on Windows

When the Installation Wizard is finished, you may need to check the log files and change the system variables as necessary.

To check the installation log files on Windows

- 1 Open the `$INSTALL_DIR\Log\install.log` file.
- 2 If you have installed Siebel Data Warehouse, open the log files in `$INSTALL_DIR\DAC\log\config`. These files show the number of tables installed in the Siebel Data Warehouse.
- 3 Click Finish to close the window.

About the Siebel Data Warehouse and the Data Warehouse Application Console

In this release, you use the Data Warehouse Application Console, or DAC, to administer and configure the Siebel Data Warehouse.

- If you are choosing to install the complete Siebel Analytics Suite, including the Siebel Data Warehouse, the installation includes the DAC.

Before the DAC can be used, however, you must configure it. See the information on configuring the Siebel Data Warehouse in *Siebel Data Warehouse Installation and Administration Guide*.

- If you have already installed Siebel Analytics, and are choosing to install Siebel Data Warehouse, you can run an incremental installation.

For additional Siebel Data Warehouse installation information, see *Siebel Data Warehouse Installation and Administration Guide*.

About Your Siebel Analytics Repository

The default Siebel Analytics applications repository is SiebelAnalytics.rpd. You generate this repository using the Siebel Analytics Server Administration Tool. Analytics applications licensing permits you to access only those Siebel Analytics dashboards, subject areas, and reports for which you have purchased licenses.

The default Stand-Alone Analytics repository (for Windows) is demo1.rpd. This repository is given as a sample only.

See *Siebel Analytics Server Administration Guide*.

About Accessing Siebel Analytics Applications Dashboards

If you installed a Siebel Analytics application, the Siebel Analytics dashboards will be accessible only through the Siebel eBusiness application interface (the Siebel operational application interface). [Chapter 11, “Siebel Industry Applications Analytics Metadata,”](#) describes the configuration necessary for the Siebel Analytics dashboards to be accessible from views in the Siebel operational application.

For further information on the factors that affect the display of Dashboard hyperlinks, see Siebel FAQ (Frequently Asked Questions) 1760.

About Siebel Analytics Executable Files

The `$INSTALLDIR\SiebelAnalytics\Bin` folder contains all of the executable files invoked by Siebel Analytics Server components, as well as some utilities that are described in *Siebel Analytics Server Administration Guide*. It also contains some command-line utilities, listed in the following section.

CAUTION: It is recommended that you contact Siebel Technical Support *before* using any of the utilities listed in the following section. Some are not supported, and can damage your data or Siebel Analytics installation if not used properly. Use these utilities with caution.

Siebel Analytics Command Utilities

The Siebel Analytics command utilities are:

- nQcmd.exe
- NQChangePassword.exe
- nQSecUDMLGen.exe
- nQSShutdown.exe
- nQUDMLCli.exe
- nQUDMLExec.exe
- nQUDMLGen.exe
- SchConfig.exe
- SchShutdown.exe
- SASchInvoke.exe

Troubleshooting the Siebel Analytics Installation Under Windows

This section details some common problems observed during installation and suggests possible solutions. To resolve the problem, look for it in the Symptom/Error Message column in [Table 6](#).

Table 6. Common Installation Problems and Solutions

| Symptom/Error Message | Diagnostic Steps/Cause | Solution |
|---|--|--|
| The Windows Eventvwr system log shows: The server failed to load application '/LM/W3SVC/1/ROOT'. The error was 'The specified metadata was not found.' | The browser did not load the default.asp page. | Change the default.asp page. To do this, follow the procedure in “Changing the Siebel Analytics Default ASP Page” on page 51. |
| In some cases, the desktop icon in the "Please Select a License File" screen does not function. | Java software problem. | Instead of using the desktop icon, select the license file from the tree browser. |

Installing Siebel Analytics Software in the UNIX Environment

2

This chapter provides information about installing, configuring, and using Siebel Analytics components in the UNIX environment.

NOTE: The Siebel Analytics Installation Wizard runs only under Windows systems. The third-party Informatica installer is available for Windows only. See [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment,”](#) for instructions to install under Windows.

This chapter contains the following topics:

- [“Siebel Analytics Components Supported on UNIX”](#) on page 60
- [“Installation Prerequisites—All UNIX Platforms”](#) on page 60
- [“Process of Installing Siebel Analytics Components On UNIX”](#) on page 62
- [“Process of Creating and Configuring Scheduler Tables \(Stand-Alone on UNIX\)”](#) on page 106
- [“Configuring IBM DB2 Connect for Queries on Siebel Analytics Server”](#) on page 112
- [“Process of Installing Siebel Analytics Web on UNIX Platforms”](#) on page 88
- [“Scripts for Basic Siebel Analytics Server Settings”](#) on page 102
- [“Troubleshooting the Siebel Analytics Installation on UNIX”](#) on page 117

Siebel Analytics Components Supported on UNIX

In this version, the following Siebel Analytics software components are available on UNIX platforms:

- Siebel Analytics Server
- Siebel Analytics Web:
 - Siebel Intelligence Dashboard
 - Siebel Answers
 - Siebel Delivers
- Siebel Analytics Client

NOTE: Siebel Analytics Client consists of the Siebel Analytics ODBC driver only. This driver allows any application to connect to the Siebel Analytics Server. Siebel Analytics Web also uses this driver to connect to the Siebel Analytics Server.

- Siebel Analytics Scheduler

NOTE: Although the Siebel Analytics repository and Web catalog are portable to UNIX platforms, you must first install and configure the repository file (.rpd file) on a Windows platform using the Siebel Analytics Server Administration Tool, then ftp the repository file to the UNIX platform. The Siebel Analytics Server Administration Tool is currently supported only on the Windows platform.

Installation Prerequisites—All UNIX Platforms

This section lists tasks that should be completed and items you need to be aware of before installing Siebel Analytics software.

- For DCOM and TCP/IP information, review [“Checking Siebel Analytics Server Client/Server Communication”](#) on page 29.

- You must have the third-party software for Java and Xvfb installed. See *Siebel System Requirements and Supported Platforms* for the correct versions to use with this version of Siebel Analytics.
- Choose a user ID that will be running all Siebel Analytics processes. You may need to create the user ID first.
- If you are reinstalling or installing a new version of Siebel Analytics, you must first uninstall the software. See [“Uninstalling Siebel Analytics on UNIX.”](#)

Uninstalling Siebel Analytics on UNIX

On UNIX, there is no Siebel Analytics uninstall script. If you wish to uninstall the software, follow this procedure.

To uninstall Siebel Analytics on UNIX

- 1 Make backups of the Web Catalog, repository (.rpd), and the instanceconfig.xml, DBFeatures.INI, NQConfig.INI, NQClusterConfig.INI, and user.csh (or user.sh) files. Move them to a temporary location.

NOTE: The DBFeatures.INI, NQConfig.INI, and NQClusterConfig.INI files for UNIX are located at `$INSTALLDIR/Config`. The instanceconfig.xml file for UNIX is located at `$INSTALLDIR/Data/web/config`.

- 2 Make sure none of the Siebel Analytics processes is running.
- 3 Delete the folder where Siebel Analytics is installed.

Installation Prerequisites For HP-UX

For successful Siebel Analytics Server operations on HP-UX, some kernel parameters such as the following may need to be adjusted. These parameters and their corresponding values are provided as examples and rough guidelines only. You can adjust these and other parameters based on actual system load, usage patterns such as the number of concurrent users and sessions, the types of queries, query frequency, database sizes, and so on.

```
max_thread_proc: 1024
```

```
maxdsiz: 0x90000000
maxssiz: 16777216
maxtsiz: 0x40000000
shmseg: 120
swapmem_on: 1
maxfiles: 2048
maxfiles_lim: 2048
dbc_max_pct: 50
```

There may be HP operating system patches that must be installed. Failure to install these patches could lead to extremely long Siebel Analytics Server startup times. For a list of these patches, see *Siebel System Requirements and Supported Platforms*.

Process of Installing Siebel Analytics Components On UNIX

This section describes how to install only the Siebel Analytics Server software on UNIX. For instructions to install other Siebel Analytics components under Windows, see [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment.”](#)

In UNIX, the default installation directory is `/usr/local/SiebelAnalytics`. The following steps refer to this location as `$INSTALLDIR`. (You may need to contact your administrator to create this directory and give you write permission.)

This section contains the following topics:

- [“About Siebel Analytics Installation Types on UNIX”](#)
- [“Running the Installer Script on UNIX” on page 64](#)
- [“Testing the Siebel Analytics Server Installation on UNIX Platforms” on page 84](#)
- [“Troubleshooting When the Siebel Analytics Server Fails to Start \(UNIX\)” on page 87](#)

About Siebel Analytics Installation Types on UNIX

Depending on your licensing, you use a different command to install the Siebel Analytics features.

- If you are installing Siebel Analytics Stand-Alone, use the installer:

```
sainstall
```

The options for Siebel Analytics Stand-Alone are as follows:

| Option | See the Section... |
|---|---|
| Everything | See “Siebel Analytics Stand-Alone-Everything” on page 66 |
| Siebel Analytics Server (including Siebel Analytics Client) | See “Siebel Analytics Stand-Alone-Partial Installations” on page 67 |
| Siebel Analytics Client only | |
| Siebel Analytics Web (including Siebel Analytics Client) only | |
| Siebel Analytics Scheduler only | |
| Siebel Analytics Cluster Controller only | |

- If you are installing Siebel Analytics applications, use the installer:

```
sainstall-apps
```

The options for Siebel Analytics applications are as follows:

| Option | See the Section... |
|---|--|
| Everything | “Siebel Analytics Applications-Everything” on page 73 |
| Siebel Analytics Server (including Siebel Analytics Client) | “Siebel Analytics Applications-Partial Installations” on page 75 |
| Siebel Analytics Client | |
| Siebel Analytics Web (including Siebel Analytics Client) only | |
| Siebel Analytics Scheduler only | |
| Siebel Analytics Cluster Controller only | |
| Siebel Data Warehouse Administration Console Server | |

NOTE: Although the Siebel Analytics repository and Web catalog are portable to UNIX platforms, you must first install and configure the repository file (.rpd file) on a Windows platform using the Siebel Analytics Server Administration Tool, then ftp the repository file to the UNIX platform. The Siebel Analytics Server Administration Tool is currently supported only on the Windows platform.

Running the Installer Script on UNIX

The following procedures describe the installer scripts for each the installation options for installing Siebel Analytics.

To install the Siebel Analytics software on UNIX

- 1** Log in as the user who will be running the Analytics processes.
- 2** Insert the Siebel Analytics Server installation CD-ROM.

- 3 Change to the directory where the installation CD-ROM is mounted.
- 4 Run the installer.

The installation script has various prompts and default answers to prompts. The prompts and their defaults and meanings (for each installation option) are shown in the appropriate section that follows.

NOTE: Default ports are used for installation. If you want to modify the port numbers, see [Appendix A, “NQSConfig.INI File Reference.”](#)

- 5 Proceed to [“Testing the Siebel Analytics Server Installation on UNIX Platforms” on page 84.](#)

About Installer Prompts in the UNIX Installation Script

This section lists the series of prompts you must respond to for each setup option type you choose.

Siebel Analytics Stand-Alone–Everything

| Prompt | Default | Notes |
|---|-----------------------------------|--|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 6. (Everything) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 6 correct? | y/n/q | |
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |
| Is \$INSTALLDIR correct? | y/n/q | |
| Cache Location | <i>\$INSTALLDIR</i> /Data/Cache | 500 MB free space required |
| Is <i>\$INSTALLDIR</i> /Data/Cache correct? | y/n/q | |
| Size of the Cache (Minimum 500) | 500 MB for applications Analytics | 100 MB for Stand-Alone Analytics |
| Is 500 correct? | y/n/q | |
| The Java home directory | /usr/java | |
| Is /usr/java correct? | y/n/q | |
| Preparing to install | | |

| Prompt | Default | Notes |
|--|---------|-------|
| Launching installer | | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at <i>\$INSTALLDIR/Install.log</i> | | |

Siebel Analytics Stand-Alone–Partial Installations

NOTE: If you already have installed one or more Siebel Analytics components, running the installer script again to install additional components causes a warning message to be displayed, stating that you may continue to install features, but that reinstalling may overwrite any patches that you have installed.

■ Siebel Analytics Server only

| Prompt | Default | Notes |
|---|--|--|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 1. (Siebel Analytics Server (including Siebel Analytics Client)) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 1 correct? | y/n/q | |
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

| Prompt | Default | Notes |
|---|-------------------------------------|-------------------------------------|
| Is \$INSTALLDIR correct? | y/n/q | |
| Cache Location | <i>\$INSTALLDIR</i> /Data/ Cache | 500 MB free space required |
| Is <i>\$INSTALLDIR</i> /Data/ Cache correct? | y/n/q | |
| Size of the Cache (Minimum 500) | 500 MB for applications | 100 MB for Stand-Alone Analytics |
| Is 500 correct? | y/n/q | |
| Preparing to install | | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at <i>\$INSTALLDIR</i> /Install.log | | |

■ Siebel Analytics Client only

| Prompt | Default | Notes |
|--|---------------------------------|--|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 2. (Siebel Analytics Client) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 2 correct? | y/n/q | |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

| Prompt | Default | Notes |
|--|-----------------------------------|---|
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |
| Is <i>\$INSTALLDIR</i> correct? | y/n/q | |
| Siebel Analytics Server's name (local is the same as localhost?) | y/n/q | The default option is local, which is also the same as localhost. If the user types in some other name, that name is used as the server's name. |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at <i>\$INSTALLDIR/Install.log</i> | | |

■ Siebel Analytics Web (including Siebel Analytics Client) only

| Prompt | Default | Notes |
|---|---|---|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 3. (Siebel Analytics Web (including Siebel Analytics Client)) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 3 correct? | y/n/q | |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

| Prompt | Default | Notes |
|--|-----------------------------------|---|
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as \$INSTALLDIR. |
| Is \$INSTALLDIR correct? | y/n/q | |
| Siebel Analytics Server's name (local is the same as localhost?) | y/n/q | The default option is local, which is also the same as localhost. If the user types in some other name, that name is used as the server's name. |
| The Java home directory | /usr/java | |
| Is /usr/java correct? | y/n/q | |
| Copying over Corda Installation file, this may take a few moments. | | |
| Preparing to install | | |
| Extracting the installation resources from the installer archive | | |
| Configuring the installer for the system's environment | | |
| Launching installer | | |
| Installing PopChart | | |
| Preparing SILENT Mode Installation | | |
| PopChart Installation has been completed. | | |
| Installing Siebel Analytics components. | | |

| Prompt | Default | Notes |
|--|---------|-------|
| Installation done! | | |
| The Install Log is located at <i>\$INSTALLDIR/Install.log</i> | | |

■ Siebel Analytics Scheduler only

| Prompt | Default | Notes |
|--|---------------------------------------|---|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 4. (Siebel Analytics Scheduler) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 4 correct? | y/n/q | |
| The default Siebel Analytics Suite root directory | [/usr/local/ SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |
| Is <i>\$INSTALLDIR</i> correct? | y/n/q | |
| Cache Location | <i>\$INSTALLDIR/Data/ Cache</i> | 500 MB free space required |
| Is <i>\$INSTALLDIR/Data/ Cache</i> correct? | y/n/q | |
| Size of the Cache (Minimum 500) | 500 MB for applications Analytics | 100 MB for Stand-Alone Analytics |
| Is 500 correct? | y/n/q | |
| Installing Siebel Analytics components. | | |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

| Prompt | Default | Notes |
|--|---------|-------|
| Installation done! | | |
| The Install Log is located at <i>\$INSTALLDIR/Install.log</i> | | |

■ Siebel Analytics Cluster Controller only

| Prompt | Default | Notes |
|---|--|--|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 5. (Siebel Analytics Cluster Controller) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 5 correct? | y/n/q | |
| Service Start Type | Choose whether these Siebel Analytics Services will start automatically at machine startup time, or will need to be started manually: <ul style="list-style-type: none">■ Analytics Server (default is Automatic)■ Analytics Scheduler (default is Manual)■ Analytics Cluster (default is Manual)■ Analytics Web (default is Automatic) Click Next. | If Server Service starts automatically, the machine boot time will increase. |

| Prompt | Default | Notes |
|--|---|-------|
| Analytics Cluster Server Account Name | Accept the default (LocalSystem), or specify the account name (in the format domain\user) and the password. Click Next. | |
| Extracting the installation resources from the installer archive | | |
| Configuring the installer for this system's environment | | |
| Launching installer | | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at \$INSTALLDIR/Install.log | | |

Siebel Analytics Applications—Everything

NOTE: If you have purchased a Siebel Analytics application, the Siebel Analytics repository (.rpd) file will be generated based on the license keys for that application. See [Chapter 10, “Siebel Analytical Applications Metadata,”](#) for more information about application licensing.

| Prompt | Default | Notes |
|---|-----------------|--|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

| Prompt | Default | Notes |
|--|-----------------------------------|--|
| Please select setup type | 7. (Everything) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 7 correct? | y/n/q | |
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |
| Is <i>\$INSTALLDIR</i> correct? | y/n/q | |
| Cache Location | <i>\$INSTALLDIR</i> /Data/Cache | 500 MB free space required |
| Is <i>\$INSTALLDIR</i> /Data/Cache correct? | y/n/q | |
| Size of the Cache (Minimum 500) | 500 MB for applications Analytics | 100 MB for Stand-Alone Analytics |
| Is 500 correct? | y/n/q | |
| The Java home directory | /usr/java | |
| Is /usr/java correct? | y/n/q | |
| Do you wish to install ePharma Disconnected Application? | y | Note that the default answer is Yes. |
| Installing ePharma Disconnected Application | | If you are upgrading or reinstalling, there may be a message about copying over Corda files. |
| Preparing to install | | |
| Extracting the installation resources from the installer archive | | |
| Configuring the installer for this system's environment | | |
| Launching installer | | |

| Prompt | Default | Notes |
|---|---------|------------------------------------|
| Preparing SILENT Mode Installation | | |
| Installing PopChart | | This is the PopChart installation. |
| PopChart installation has been completed. | | |
| Installing Data Warehouse components. | | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at <code>\$INSTALLDIR/Install.log</code> | | |

Siebel Analytics Applications—Partial Installations

- Siebel Analytics Server only

| Prompt | Default | Notes |
|---|--|---|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 1. (Siebel Analytics Server (including Siebel Analytics Client)) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 1 correct? | y/n/q | |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

| Prompt | Default | Notes |
|--|-----------------------------------|--|
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |
| Is <i>\$INSTALLDIR</i> correct? | y/n/q | |
| Cache Location | <i>\$INSTALLDIR</i> /Data/Cache | 500 MB free space required |
| Is <i>\$INSTALLDIR</i> /Data/Cache correct? | y/n/q | |
| Size of the Cache (Minimum 500) | 500 MB for applications Analytics | 100 MB for Stand-Alone Analytics |
| Is 500 correct? | y/n/q | |
| Preparing to install | | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at <i>\$INSTALLDIR</i> /Install.log | | |

■ Siebel Analytics Client only

| Prompt | Default | Notes |
|---|-----------------|--|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |

| Prompt | Default | Notes |
|--|-----------------------------------|---|
| Please select setup type | 2. (Siebel Analytics Client) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 2 correct? | y/n/q | |
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |
| Is \$INSTALLDIR correct? | y/n/q | |
| Siebel Analytics Server's name (local is the same as localhost?) | y/n/q | The default option is local, which is also the same as localhost. If the user types in some other name, that name is used as the server's name. |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at <i>\$INSTALLDIR/Install.log</i> | | |

■ Siebel Analytics Web (including Siebel Analytics Client) only

| Prompt | Default | Notes |
|---|-----------------|--|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

| Prompt | Default | Notes |
|--|---|---|
| Please select setup type | 3. (Siebel Analytics Web (including Siebel Analytics Client)) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 3 correct? | y/n/q | |
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |
| Is \$INSTALLDIR correct? | y/n/q | |
| Siebel Analytics Server's name (local is the same as localhost?) | y/n/q | The default option is local, which is also the same as localhost. If the user types in some other name, that name is used as the server's name. |
| The Java home directory | /usr/java | |
| Is /usr/java correct? | y/n/q | |
| Copying over Corda Installation file, this may take a few moments. | | |
| Preparing to install | | |
| Extracting the installation resources from the installer archive | | |
| Configuring the installer for the system's environment | | |
| Launching installer | | |
| Installing PopChart | | |
| Preparing SILENT Mode Installation | | |

| Prompt | Default | Notes |
|---|---------|-------|
| PopChart Installation has been completed. | | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at <i>\$INSTALLDIR/Install.log</i> | | |

■ Siebel Analytics Scheduler only

| Prompt | Default | Notes |
|---|-----------------------------------|--|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 4. (Siebel Analytics Scheduler) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 4 correct? | y/n/q | |
| The default Siebel Analytics Suite root directory | [/usr/local/SiebelAnalytics]: xxx | xxx is the continuation of the path on your machine. In the following steps it is referred to as <i>\$INSTALLDIR</i> . |
| Is <i>\$INSTALLDIR</i> correct? | y/n/q | |
| Cache Location | <i>\$INSTALLDIR/Data/Cache</i> | 500 MB free space required |
| Is <i>\$INSTALLDIR/Data/Cache</i> correct? | y/n/q | |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

| Prompt | Default | Notes |
|---|-------------------------|----------------------------------|
| Size of the Cache (Minimum 500) | 500 MB for applications | 100 MB for Stand-Alone Analytics |
| Is 500 correct? | y/n/q | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at <code>\$INSTALLDIR/Install.log</code> | | |

■ Siebel Analytics Cluster Controller only

| Prompt | Default | Notes |
|---|--|---|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 5. (Siebel Analytics Cluster Controller) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 5 correct? | y/n/q | |

| Prompt | Default | Notes |
|--|--|---|
| Service Start Type | <p>Choose whether these Siebel Analytics Services will start automatically at machine startup time, or will need to be started manually:</p> <ul style="list-style-type: none">■ Analytics Server (default is Automatic)■ Analytics Scheduler (default is Manual)■ Analytics Cluster (default is Manual)■ Analytics Web (default is Automatic) <p>Click Next.</p> | <p>If Server Service starts automatically, the machine boot time will increase.</p> |
| Analytics Cluster Server Account Name | <p>Accept the default (LocalSystem), or specify the account name (in the format domain\user) and the password. Click Next.</p> | |
| Extracting the installation resources from the installer archive | | |
| Configuring the installer for this system's environment | | |
| Launching installer | | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |
| The Install Log is located at \$INSTALLDIR/Install.log | | |

Installing Siebel Analytics Software in the UNIX Environment

Process of Installing Siebel Analytics Components On UNIX

■ Siebel Data Warehouse only

| Prompt | Default | Notes |
|---|----------------------------|---|
| [License Agreement] Accept? | y/n | You must select y to continue. |
| Please select language for error messages | 1. (English-US) | The last option (18. Abort) exits the program. |
| Is language type 'English (US)' correct? | y/n/q | |
| Please select setup type | 6. (Siebel Data Warehouse) | The setup type chosen determines which subsequent prompts appear. |
| Is setup type 6 correct? | y/n/q | |
| Installing Siebel Analytics components. | | |
| Installation done! | | |

Post-Installation Tasks for UNIX Platforms

This section describes the tasks you may need to perform after running the installer script.

- [“Locating the Database Setup Script” on page 83](#)
- [“Testing the Siebel Analytics Server Installation on UNIX Platforms” on page 84](#)
- [“Troubleshooting When the Siebel Analytics Server Fails to Start \(UNIX\)” on page 87](#)

Locating the Database Setup Script

Put your database-related setup script in `$INSTALLDIR/setup/user.sh` or `$INSTALLDIR/setup/user.csh`, as appropriate.

NOTE: You must verify the validity of the database setup script, because it is called from the Siebel Analytics startup script.

- Sample 1 (user.sh excerpts):

```
# ORACLE Parameters
#-----
ORACLE_HOME=/export/home/siebel/oracle/9.0.1
export ORACLE_HOME
TNS_ADMIN=$ORACLE_HOME/network/admin
export TNS_ADMIN
PATH=$ORACLE_HOME/bin:/opt/bin:$PATH
export PATH
LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH:/opt/j2se/
jre/lib/sparc
#-----

# DB2 Parameters
#-----
# For DB2 Uncomment the following
#DB2_HOME=/opt/IBMdb2/V7.1
#export DB2_HOME
#export DB2DIR=/opt/IBMdb2/V7.1
#export SQLLIB=$DB2DIR/sqllib
#export DB2INSTANCE=an7s
```

```
#if [ -f $SQLLIB/db2profile ]; then
# . $SQLLIB/db2profile
#fi
#LD_LIBRARY_PATH=$DB2DIR/lib:$DB2_HOME/lib:$LD_LIBRARY_PATH:/
opt/j2se/jre/lib/spa
rc#-----

export LD_LIBRARY_PATH
```

■ Sample 2 (user.csh excerpts):

```
#ORACLE Settings
#-----
setenv ORACLE_HOME /export/home/siebel/oracle/9.0.1
setenv TNS_ADMIN ${ORACLE_HOME}/network/admin
setenv PATH ${ORACLE_HOME}/bin:/opt/bin:${PATH}
setenv LD_LIBRARY_PATH ${ORACLE_HOME}/
lib:${LD_LIBRARY_PATH}:/opt/j2se/jre/lib/sparc
#-----

#DB2 Settings
#-----
# to enable, uncomment the following
#setenv DB2_HOME /opt/IBMdb2/V7.1
#setenv DB2DIR /opt/IBMdb2/V7.1
#setenv DB2INSTANCE an7s
#setenv SQLLIB ${DB2DIR}/sqllib
#if ( -f ${SQLLIB}/db2cshrc ) source ${SQLLIB}/db2cshrc
#setenv LD_LIBRARY_PATH ${DB2DIR}/lib:${DB2_HOME}/
lib:${LD_LIBRARY_PATH}:/opt/j2se/jre/lib/sparc
#-----
```

Testing the Siebel Analytics Server Installation on UNIX Platforms

After the installation, test the setup.

To test the Siebel Analytics Server installation on UNIX

- 1 Log out and close your X Window shell, then start a new X Window shell.
- 2 Start the Siebel Analytics Server from the `$INSTALLDIR/setup` directory by running one of the following scripts:

- If you are using sh or bash:

```
run-sa.sh start
```

- If you are using csh:

```
source sa.csh
run-sa.csh start
```

At this point you may need to change connection pool settings for items such as the name of the database, the user ID and password, and other settings for the several repositories bundled with applications version of Siebel Analytics.

- The default repository for integrated Analytics applications is SiebelAnalytics.rpd.
- The default repository for Stand-Alone Analytics is ORA_northwind.rpd.

NOTE: Changing connection pool settings can be done only in the Server Administration Tool, which is available only on Windows platforms. Edit the repository on a Windows platform and port it to the UNIX platform.

To test the Siebel Analytics client installation on UNIX

- 1 Run Siebel Analytics Client by opening another session. From the setup directory `$INSTALLDIR/setup`, run one of the following scripts.

- If you are using sh or bash, run:

```
. sa-cli.sh
```

- If you are using csh, run:

```
source sa-cli.csh
```

To test the client/server connectivity, run:

```
nqcmd.exe
```

- 2 Make sure all clients are disconnected from the Siebel Analytics Server, and then stop the server.

- If you are using sh or bash:

```
run-sa.sh { start | {stop -d <data source name> -u <user
name> -p <password>} }
```

- If you are using csh:

```
run-sa.csh { start | {stop -d <data source name> -u <user  
name> -p <password>} }
```

For example:

```
run-sa.csh stop -d AnalyticsWeb -u Administrator -p SADMIN
```

Troubleshooting When the Siebel Analytics Server Fails to Start (UNIX)

If the startup operation fails, look in the following log files for messages indicating possible reasons.

- NQServer.log file, located in the Log subdirectory in the Siebel Analytics software installation directory. You can use a text editor to view this file. (Set your viewer to UTF-8 to avoid seeing garbled text.)
- Make sure that the syslog service is running, and look for any system or Siebel Analytics-related messages.

The log files contain messages indicating why the server startup failed. For example, if there were a syntax error in the NQSConfig.INI file, both the operating system's log and the NQServer.log file would contain messages about the syntax error. After examining the log messages, correct the problem and start the server again.

NOTE: You can delete the installation directory after saving any repositories and configuration files. A remove utility is not provided on UNIX.

Process of Installing Siebel Analytics Web on UNIX Platforms

This section describes the installation of the components required to run Siebel Analytics Web under UNIX. If you selected the Siebel Analytics Web component to install during the main Siebel Analytics installation, you should read this section.

The main topics of this section are:

- [“About Siebel Analytics Web Components on UNIX Platforms” on page 88](#)
- [“About Configuring Siebel Analytics Web on UNIX” on page 89](#)
- [“Changing the Siebel Analytics Web ODBC DSN” on page 89](#)
- [“About the Siebel Analytics Web Catalog on UNIX” on page 90](#)
- [“About Upgrading Previous Siebel Analytics Web Catalogs” on page 90](#)
- [“Installing Siebel Analytics Web on Sun ONE Web Server \(Solaris\)” on page 90](#)
- [“Installing Siebel Analytics on WebSphere” on page 93](#)
- [“Configuring Siebel Analytics for Apache Tomcat Server \(Stand-Alone on UNIX\)” on page 99](#)
- [“Inserting Your Siebel Analytics Web License Keys” on page 101](#)

NOTE: The Analytics Web user credentials should be the same as those for the user running all Siebel Analytics processes.

About Siebel Analytics Web Components on UNIX Platforms

The UNIX version of Siebel Analytics Web consists of:

- Siebel Analytics Web Server executable, which performs all the functions.

- Java servlet, which creates socket connections to Siebel Analytics Web Server and uses TCP/IP to redirect HTTP requests to Siebel Analytics Web Server.

The servlet adheres to the Java Servlet 2.2 specification, and therefore part of the installation process involves deployment of this servlet.

The Analytics Web, Analytics Client, and Analytics Server components can be installed to run on separate machines.

About Configuring Siebel Analytics Web on UNIX

Several Siebel Analytics Web configuration settings are created by default during the installation process. These entries can be customized for your environment. Additionally, the Siebel Analytics Web administrator can add other configuration settings to control a variety of Siebel Analytics Web configuration characteristics. You need to make changes only if you want to change default parameters, such as the name of the Siebel Analytics Web Catalog, or override internal default settings, such as the time for client connections to expire.

The XML file `instanceconfig.xml` is used to hold configuration settings for Siebel Analytics Web on UNIX platforms. You can customize Siebel Analytics Web by modifying the entries in `instanceconfig.xml` and adding new entries to override internal default settings. This file for UNIX is located at `$INSTALLDIR/Data/web/config`.

For information about the entries you can make to customize Siebel Analytics Web and general information about customizing the `instanceconfig.xml` file in the UNIX environment, see *Siebel Analytics Web Administration Guide*.

Changing the Siebel Analytics Web ODBC DSN

Siebel Analytics Web accesses a Siebel Analytics Server repository with a single Siebel Analytics Server data source name (DSN). The installation process configures a DSN named `AnalyticsWeb` for this purpose. For information on configuring a new or existing DSN, see *Siebel Analytics Server Administration Guide*.

If you change the name of the DSN, you need to update the Siebel Analytics Web XML configuration file `instanceconfig.xml` to use the new name.

Siebel Analytics Web must use a single DSN.

About the Siebel Analytics Web Catalog on UNIX

The Siebel Analytics Web Catalog stores the application dashboards and report definitions. It also contains information regarding permissions and accessibility of the dashboards by groups.

The SiebelAnalytics.webcat is installed automatically into the `$INSTALLDIR/Data/web/catalog` folder when you install an integrated version from the Apps_Windows or Apps_UNIX folders.

About Upgrading Previous Siebel Analytics Web Catalogs

The Siebel Analytics Web Catalog stores the application dashboards and report definitions. It also contains information regarding permissions and accessibility of the dashboards by groups. If you are upgrading Siebel Analytics from an earlier version, see the *Siebel Analytics Web Administration Guide* before installing Siebel Analytics.

Starting the Analytics Web Server on UNIX

The following commands set up the environment and runs the Siebel Analytics Web Server manually.

To start the Web Server on UNIX

- If you are using the Standard shell, use the command

```
run-saw.sh start
```

- If you are using the C shell, use the command

```
run-saw.csh start
```

Installing Siebel Analytics Web on Sun ONE Web Server (Solaris)

You need a user name and password in order to access the Sun ONE Web Server Administration Server. In addition, depending upon how Sun ONE is installed, you may also need root access. Refer to Sun ONE documentation for additional details.

To install Siebel Analytics Web on Sun ONE Web Server, you perform the following process:

- [“Creating a New Virtual Server on Sun ONE” on page 91](#)
- [“Editing the web-apps.xml File on Sun ONE” on page 91](#)
- [“Testing the Sun ONE Web Server” on page 92](#)

Creating a New Virtual Server on Sun ONE

This is the first task in the process of installing Siebel Analytics Web on Sun ONE Web Server.

To create a new virtual server on Sun ONE

- 1 Navigate to the Sun ONE Web Server Administration Server > Servers tab.
- 2 Create a new virtual server. Assign the Server Name field a value that can be accessed through DNS.

In most cases, the default value may be accepted. Change this value only if you are sure that the name you typed in is a valid name that can be translated to a network address through DNS.

NOTE: The Server Name field is also used to resolve paths to Siebel Analytics Web charts.

- 3 In the Server Port field, assign the port number you wish the Web Server process to listen on.
- 4 Assign the Server Identifier field a value that helps an administrator to identify the purpose of a particular virtual server.

Editing the web-apps.xml File on Sun ONE

When you create a new virtual server, the Sun ONE Web Server Administration Server creates a new directory for this server, typically named `https-ServerIdentifier`, where `ServerIdentifier` is the value you entered in the similarly named field when you created the virtual server. This directory contains an XML file named `web-apps.xml`. This file must be edited.

To edit the web-apps.xml file

- 1 Locate the `https-ServerIdentifier` directory. For example:

```
/usr/local/iplanet6sp5/servers/https-saw
```

- 2 Locate the file `web-apps.xml` in the config subdirectory of your virtual server's directory (for example, `/usr/local/iplanet6sp5/servers/https-saw/config/web-apps.xml`).
- 3 Add the line:

```
<web-app uri="/analytics" dir="$INSTALLDIR/web/app" />
```

Replace `$INSTALLDIR` with the complete path to the Analytics installation directory.

CAUTION: Make sure that XML syntax is strictly followed when editing this file. Any XML syntax errors may result in your virtual server failing to start.

- 4 If you started the virtual server at any point during the installation procedure, you must now stop it by using the administration console or the stop script present in your virtual server directory.

Testing the Sun ONE Web Server

After installing the Sun ONE Web Server, test the Siebel Analytics Web Server.

To test the Sun ONE Web Server installation

- 1 Start the Siebel Analytics Web Server. (See [“Starting the Analytics Web Server on UNIX” on page 90.](#))
- 2 Start the Sun ONE virtual server process being used for Analytics Web.
- 3 Open a Web browser and attempt to browse to the location where you have installed Analytics Web. In the example, the URL would be:

```
http://<ServerName>:<port number>/analytics/saw.dll?Dashboard
```

Replace `<ServerName>` with the correct server name and `<port number>` with the appropriate port number.

If you see a login page you have successfully installed Siebel Analytics Web.

Installing Siebel Analytics on WebSphere

To install Siebel Analytics Web on WebSphere, you perform the following process:

- “Confirming WebSphere Daemon is Running” on page 93
- “Stopping the Web Server” on page 93
- “Restarting WebSphere” on page 94
- “Creating a New Application Server” on page 95
- “Creating a WebARchive (WAR) File” on page 95
- “Deploying the WAR file” on page 96
- “Restarting WebSphere Again” on page 97
- “Confirming That Siebel Analytics Web is Functioning” on page 98
- “Checking the Port Number Being Used by Siebel Analytics” on page 98

Confirming WebSphere Daemon is Running

This is the first task in the process of installing Siebel Analytics on WebSphere.

To confirm that the WebSphere daemon is running

- 1 Log in as root.
- 2 Start a telnet session to the AIX machine.
- 3 Run the following command.

```
ps -ef | grep WebSphere
```

If WebSphere is running, you should see a list of grep results.

Stopping the Web Server

This is the second task in the process of installing Siebel Analytics on WebSphere.

To stop the Web Server

- 1 Start the WebSphere Advanced Administration Console. Do this using one of the following methods:

- Start the Windows Administration Client.

```
$WAS\bin\adminclient.bat <Server Name>
```

- Run the Administration Console through the X Window System.

```
$WAS/bin/adminclient.sh <Server Name>
```

- 2 Remove any existing Siebel Analytics-related services under the Enterprise Applications directory.

- a In the WebSphere Administrative Domain tree, expand the Enterprise Applications directory.
- b Right-click on the Analytics Enterprise and choose Stop. Remove the service.

Restarting WebSphere

This is the third task in the process of installing Siebel Analytics on WebSphere.

To restart WebSphere

- 1 Return to the WebSphere Advanced Administrative Console session.
- 2 Run the following commands:

```
ps -ef|grep Web  
  
/usr/WebSphere/AppServer/bin  
./startupServer.sh &  
  
ps -ef|grep Web
```

The process requires approximately a minute to finish.

- 3 Open up the WebSphere Advanced Administrative Console on AIX or Windows.

If the Server started successfully, you should see the following output in the WebSphere Advanced Administrative Console Event Message pane:

```
SRVE0171I: Transport http is listening on port 9080.
```

NOTE: Port 9080 is the port where the embedded HTTP Listener (Web Server) awaits requests.

- 4 Point a Web browser to `http://<Server Name>:<Port>/webapp/examples/`.
You should see the WebSphere Application Server Examples home page.
- 5 To see the IBM WebSphere Web Container configuration, click the Show server configuration hyperlink.

Creating a New Application Server

This is the fourth task in the process of installing Siebel Analytics on WebSphere.

To create a new application server

- 1 In the WebSphere Advanced Administrative Console, expand the WebSphere Administrative Domain tree to Nodes > Application Servers.
- 2 Right-click and choose New.
- 3 In the Create Application Server dialog box, enter the values for the Application Server name and the Working directory. Click OK.
- 4 Click OK on the confirmation dialog box.

Creating a WebARchive (WAR) File

This is the fifth task in the process of installing Siebel Analytics on WebSphere.

To create a WAR file

- 1 Start a telnet session to a machine that has Siebel Analytics Web installed.
- 2 Navigate to the Siebel Analytics installation directory. For example:

```
/usr/local/SiebelAnalytics
```
- 3 Set the JAVA_HOME environment variable to the root of your Java installation. For example:

```
/usr/java141.
```

- 4 Run the jar command to create the WAR file:

```
$JAVA_HOME/bin/jar cf Analytics.war -C web/app .
```

NOTE: You must include the “.” at the end of the command.

Deploying the WAR file

This is the sixth task in the process of installing Siebel Analytics on WebSphere.

To deploy the WAR file

- 1 In the WebSphere Advanced Administrative Console, go to Console > Wizards > Install Enterprise Application.
- 2 Click the Install stand-alone module radio button.
- 3 Click Browse, then click Open.
- 4 In the Application name field, enter an arbitrary name (for example, Analytics).
- 5 In the Context root for web module field, enter Analytics.
- 6 Click Next until the Selecting Application Servers window opens.
If the Virtual Host value is empty, select default_host.
- 7 Click Select Server.

Select the server created in [“Creating a New Application Server”](#) on page 95.

NOTE: Do not use the default server.

Click Finish.

Restarting WebSphere Again

This is the seventh task in the process of installing Siebel Analytics on WebSphere.

To restart WebSphere

- 1 In the WebSphere Advanced Administrative Console, navigate to WebSphere Administrative Domain > Nodes > *Server Name*.

Right-click the server and choose Stop. In the confirmation dialog box, click Yes.

- 2 After the WebSphere Advanced Administrative Console closes, start a telnet session to the machine on which WebSphere has been installed.

- 3 Navigate to `$WAS_HOME/bin`.

- 4 Run:

```
ps -ef | grep WebSphere
```

Confirm that only the `grep WebSphere` process is running (that is, that WebSphere is stopped).

- 5 Run:

```
nohup ./startupServer.sh &
```

Wait while WebSphere starts. WebSphere is started when the time column no longer increases when running multiple iterations of:

```
ps -ef | grep WebSphere
```

- 6 Start the WebSphere Advanced Administrative Console.
- 7 Regenerate the plug-in by right-clicking on Node Name and Regen WebSphere Plugin.
- 8 Start the Application Server that you defined earlier.

Confirming That Siebel Analytics Web is Functioning

This is the eighth task in the process of installing Siebel Analytics on WebSphere.

To confirm Analytics Web is functioning

- Point the Web browser to `http://<Server Name>:<Port>/Analytics`.

You should see the Siebel Analytics login Screen.

Checking the Port Number Being Used by Siebel Analytics

This is the ninth task in the process of installing Siebel Analytics on WebSphere.

To check the port number being used by Siebel Analytics

- 1** In the WebSphere Advanced Administrative Console, navigate to WebSphere Administrative Domain > Nodes > SiebelAnalytics Web.
- 2** In the Name pane, select Installed EJB Modules.
- 3** Click the Services tab and, in the Service window, choose Web Container Service. Click Edit Properties.
- 4** Click the Transport tab and, in the HTTP transports window, note the port number for the host.
- 5** Navigate to WebSphere Administrative Domain > Virtual Hosts. For default_host, click the General tab.

Check that the port number appears in the Aliases list. If it does not, add it.

Configuring Siebel Analytics for Apache Tomcat Server (Stand-Alone on UNIX)

Apache Tomcat may be configured to work in conjunction with the Apache HTTP Server. For the details of the installation process, refer to documentation for the Apache HTTP Server and Apache Tomcat software.

To configure Siebel Analytics Web on an Apache Tomcat Server, perform the following procedure.

NOTE: In the following procedure, Tomcat is installed at `/usr/local/jakarta-tomcat-4`.

To configure on Apache Tomcat on UNIX (stand-alone)

- 1 Open the file `/usr/local/jakarta-tomcat-4/conf/server.xml` in a text editor. Locate the `<Host>` tag for the virtual host you wish Siebel Analytics Web to run under. A default installation of Tomcat 4.x has a single `<Host>` tag for the default host.
- 2 Within this tag add the following element:

```
<Context path="/analytics" docBase="$INSTALLDIR/web/app"/>
```

Replace `$INSTALLDIR` with the full path to the directory where Siebel Analytics has been installed.

Setting Up a Scratch Directory

The default Tomcat Server page is `default.jsp`. The Web Server tries to access a scratch directory to handle the `jsp`. If there is no scratch directory set up, you will get exceptions in the Web Server logs. This procedure explains how to set up a scratch directory for Tomcat and iPlanet servers.

- For Tomcat, use the `workdir` parameter. For example:

```
http://jakarta.apache.org/tomcat/tomcat-4.0-doc/config/context.html
```

- For iPlanet, use the scratchdir parameter. For example:

```
web-apps.xml

<vs>

  <jsp-servlet enable="true">

    <init-param>

      <param-name>scratchdir </param-name>

      <param-value>/usr/iplanet/servers/https-wbsun054/
ClassCache/https-wbsun054/analytics</param-value>

    </init-param>

  </jsp-servlet>

  <web-app uri="/analytics" dir="/Sieb75Ana/SiebelAnalytics/
Web/Servlet"/>

</vs>
```

Testing the Tomcat Web Server Installation

Use the following procedure to test your configuration.

To test the Tomcat Web Server installation

- 1 Start the Tomcat Server by executing the following command:

```
/usr/local/jakarta-tomcat-4/bin/startup.sh.
```

- 2 Open a Web browser and attempt to browse to the location where you have installed Analytics Web. In the example, the URL is:

```
http://<Server Name>:8080/analytics
```

If you see a login page, you have successfully installed Analytics Web.

NOTE: The port number (in the example procedure, 8080) is that on which a default installation of Tomcat 4.x listens. If your installation of Tomcat uses a different port, you need to change this value.

Inserting Your Siebel Analytics Web License Keys

Siebel Systems provides a license key file, `analyticsweblicense.xml`, and license keys for the Siebel Analytics Web components a customer has licensed. When you have completed the installation, you must insert your Web license keys. Copy the `analyticsweblicense.xml` file to the `/web/config` subdirectory in the data directory on machines running Siebel Analytics Web components. The default name of the data directory is `$INSTALLDIR/Data`.

About Siebel Analytics Authentication and Security Settings

Refer to [Chapter 5, “Siebel Analytics User Authentication and Security Setup.”](#)

Scripts for Basic Siebel Analytics Server Settings

Two sets of scripts are provided, one for the standard shell and the other for the C shell. In addition, there is a command for shutting down the server cleanly.

Siebel Analytics Scripts for the Standard Shell

The scripts for the standard shell are shown in [Table 7](#).

Table 7. Siebel Analytics Scripts For the Standard Shell

| Script | Purpose |
|----------------|---|
| run-ccs.sh | Starts the cluster controller. Usage: run-ccs.sh { start stop forcestop } |
| run-sa.sh | An automatic tool that calls sa.sh and starts the Siebel Analytics Server. |
| run-sa.sh stop | Stops the Siebel Analytics Server. |
| run-saw.sh | An automatic tool that calls saw.sh and starts the Siebel Analytics Web Server. |
| run-sch.sh | Starts the scheduler. Usage: run-sch.sh { start stop -p <password> } |
| sa.sh | Sets up the environment for manual management. Run this under the current shell (source the script). Under this mode, you can run the Siebel Analytics Server manually. |
| sa-cli.sh | Sets up the environment for running the Siebel Analytics Client. Run this under the current shell (source the script). If you are managing the server manually, you need to open a separate session to do this. |
| sa-init.sh | Sets up basic Siebel Analytics Server settings. Run this to keep settings up to date after you make any changes to .reg files. This includes changes to files used by the Siebel Analytics Web (for example, when you change the Web Catalog path). |

Table 7. Siebel Analytics Scripts For the Standard Shell

| Script | Purpose |
|---------|---|
| saw.sh | Sets up the environment for manual management of Siebel Analytics Web. Run this under the current shell (source the script). Under this mode, you can run the Siebel Analytics Web Server manually. |
| user.sh | Sets up user-specific items such as the database. You do not need to run this script separately. It will be called from sa.sh. |

Siebel Analytics Scripts for the C Shell

The scripts for the C shell are shown in [Table 8](#).

Table 8. Siebel Analytics Scripts For the C Shell

| Script | Purpose |
|-----------------|---|
| run-ccs.csh | Starts the cluster controller. Usage: <code>run-ccs.csh { start stop forcestop }</code> |
| run-sa.csh | An automatic tool that calls sa.csh and starts the Siebel Analytics Server. |
| run-sa.csh stop | Stops the Siebel Analytics Server. |
| run-saw.csh | An automatic tool that calls saw.csh and starts the Siebel Analytics Web Server. |
| run-sch.csh | Starts the scheduler. Usage: <code>run-sch.csh { start stop -p <password> }</code> |
| sa.csh | Sets up the environment for manual management. Run this under the current shell (source the script). Under this mode, you can run the Siebel Analytics Server manually. |
| sa-cli.csh | Sets up the environment for running the Siebel Analytics Client. Run this under the current shell (source the script). If you are managing the server manually, you need to open a separate session to do this. |
| sa-init.csh | Sets up basic Siebel Analytics Server settings. Run this to keep settings up to date after you make any changes to .reg files. This includes changes to files used by the Siebel Analytics Web (for example, when you change the Web Catalog path). |

Table 8. Siebel Analytics Scripts For the C Shell

| Script | Purpose |
|----------|---|
| saw.csh | Sets up the environment for manual management of Siebel Analytics Web. Run this under the current shell (source the script). Under this mode, you can run the Siebel Analytics Web Server manually. |
| user.csh | Sets up user-specific items such as the database. You do not need to run this script separately. It will be called from sa.sh. |

Stopping the Siebel Analytics Server Using UNIX Commands

When starting the Siebel Analytics Server, the process utilizes additional processes and resources that may fail to stop cleanly when the Siebel Analytics Server is shut down.

When you first set up the environment, you must source sa.sh or sa.csh.

After you have set up DISPLAY, when using telnet, stop the server process using forcestop for one of the following reasons:

- You cannot shut down the Siebel Analytics Server cleanly with the commands

```
run-sa.sh stop
```

```
run-sa.csh stop
```

Instead of the two preceding commands, use the command

```
run-sa.sh forcestop
```

for Bourne shell, or

```
run-sa.csh forcestop
```

for C shell.

- You have set up your environment with sa.sh or sa.csh and are using the command:

```
nqsshutdown.exe -u Administrator
```

You may also want to check IPC resources using the command `ipcs`, and use the command `ipcrm` to remove the shared memory being used by the user ID running Siebel Analytics Server.

Post-Installation Configuration on UNIX Platforms

This section describes the necessary configuration to Siebel Analytics after running the installer script.

The number of post-installation configuration tasks necessary depends on the types of installation options you have chosen, the number and types of platforms you are using, and the complexity of your physical setup. For example, if you are installing only Siebel Analytics Stand-Alone, you have less configuration to perform than if you are installing a Siebel Analytics Industry Application with a Siebel Data Warehouse, with several localized languages.

The main topics in this section include:

- [“Process of Creating and Configuring Scheduler Tables \(Stand-Alone on UNIX\)” on page 106](#)
- [“Process of Configuring Native Databases on Siebel Analytics Server” on page 112](#)

Process of Creating and Configuring Scheduler Tables (Stand-Alone on UNIX)

This section is for sites that are running Stand-Alone Siebel Analytics and using Siebel Analytics Scheduler. It describes the relational database tables required by Siebel Analytics Scheduler and explains how to create them.

NOTE: If you are running Siebel Analytics applications, you do not have to manually create the relational database tables.

About Configuring Siebel Analytics Scheduler on UNIX

In Sun Solaris, IBM AIX, and Hewlett-Packard HP-UX UNIX environments, Siebel Analytics Scheduler runs as a process. You set Scheduler configuration options in `schconfig.exe`, a console-based application located in the `$INSTALLDIR/Bin` directory.

Execute the file `schconfig.exe` on the UNIX machine hosting Siebel Analytics Scheduler. The configuration options in `schconfig.exe` are Scheduler, Siebel Mail, and Siebel iBots.

About Siebel Analytics Scheduler Tables

This section gives brief descriptions of the database tables used by Siebel Analytics Scheduler.

NOTE: For Siebel Analytics applications, the Siebel Scheduler tables were created during the installation of Siebel 7.0.x and 7.5.x operational applications. Siebel Analytics 7.7 uses updated Scheduler tables. These updates are delivered as `.sif` files that must be applied by your Siebel Administrator. For procedures on applying `.sif` files, see *Siebel Data Warehouse Installation and Administration Guide*.

■ S_NQ_ACCT

This table is used by the Siebel Analytics Server to store accounting data. The server generates usage tracking data files when usage tracking is enabled in `NQConfig.INI`.

For information about usage tracking, see *Siebel Analytics Server Administration Guide*.

■ S_NQ_JOB

This table is used by Siebel Analytics Scheduler to store information about scheduled jobs.

■ S_NQ_INSTANCE

This table is used by Siebel Analytics Scheduler to store information about the instances of the scheduled jobs.

■ S_NQ_ERR_MSG

This table is used by Siebel Analytics Scheduler to store error messages for job instances that do not complete successfully.

- S_NQ_JOB_PARAM

This table is used by Siebel Analytics Scheduler to hold information about job parameters for scheduled jobs.

About Database Support in the Siebel Analytics Scheduler

The Scheduler works with all the supported databases for Siebel Analytics. For the complete list of supported databases, see *Siebel System Requirements and Supported Platforms*.

Creating Databases and Tables for the Siebel Analytics Scheduler

There is a one-to-one relationship between the relational database and the Scheduler. Therefore, the following conditions must be met:

- The Scheduler needs to be configured to use a database, and the database must be available for use, before the Scheduler service will start.
- Do not configure multiple Siebel Analytics Scheduler services to use a single database.

You can either create a new database in which to store the tables or use an existing database.

NOTE: Before you create a database and tables, you must have an administrative sign-on account.

To create a database and tables for use by the Scheduler

- 1** Make sure that you have a valid administrative account to create a database and tables.
- 2** Create the database, or use an existing database.
- 3** Create the Scheduler tables by executing SAJOBS.xxx.sql (where xxx is the database type).

If you are using usage statistics, create the table in SAACCT.xxx.sql.

Creating Databases and Tables for the Relational Database

The following procedures describe how to create a database and tables for these relational databases:

- Microsoft SQL Server
- Oracle
- IBM DB2

To create a database and tables for Microsoft SQL Server

- 1 Create a database named S_NQ_SCHED using Enterprise Manager. Make sure that you have enough free disk space to accommodate Siebel Analytics tables (a minimum of 500 MB for Siebel Analytics applications).
- 2 Using S_NQ_SCHED as the current database, use Query Analyzer to open the file SAJOBS.MSSQL.sql and execute it to create the Siebel Analytics Scheduler tables.
- 3 Open the file SAACCT.MSSQL.sql and execute it to create the Accounting table.

To create a database and tables for Oracle

- 1 Proceed in one of the two following ways:
 - Create a new database named S_NQ_SCHED, and create a user named S_NQ_SCHED.
 - In one of your existing databases, create a user named S_NQ_SCHED.
- 2 Provide your own password to the user S_NQ_SCHED.
- 3 Using the Oracle client configuration tool, create an Oracle Service to the current S_NQ_SCHED database with this user ID and password.
- 4 Using the SQL Worksheet, open the file SAJOBS.Oracle.sql and execute it to create Siebel Analytics Scheduler tables.
- 5 Open the file SAACCT.Oracle.sql and execute it to create the Accounting table.

To create a database and tables for IBM DB2

- 1 Create a database named S_NQ_SCHED with a valid user ID and password.

- 2** Using Command Center, open the file SAJOBS.DB2.sql and execute it to create Siebel Analytics Scheduler tables.
- 3** Open the file SAACCT.DB2.sql and execute it to create the Accounting table.

Updating the Scheduler Configuration

- After the tables have been created, update the Scheduler configuration using the command:

```
schconfig.exe
```

Starting and Shutting Down the Scheduler Process on UNIX

The UNIX commands you use to start the Scheduler depend on the UNIX shell being used.

To start the Scheduler on UNIX

1 Set up library paths.

- For C shell:

```
source sa-cli.csh
```

```
source sa.csh
```

- For Korn shell:

```
$sa-cli.sh
```

```
$sa.sh
```

2 Start the scheduler.

- For C shell:

```
nqshceduler.exe &
```

- For Korn shell:

```
nqshceduler.exe &
```

NOTE: If there is no terminal on the machine, you must define a DISPLAY environment variable in order for Scheduler to start. If the machine running Scheduler has a monitor running X Window, point it to itself. If it has no monitor, point it to another machine running X Window.

To shut down the Scheduler on UNIX

1 Set up library paths.

- For C shell:

```
source sa-cli.csh
```

- For Korn shell:

```
sa-cli.sh
```

2 Shut down the scheduler.

```
schshutdown.exe -s <machine:port> -u <username> -p <password>
```

Process of Configuring Native Databases on Siebel Analytics Server

This section covers the following topics:

- [“Configuring IBM DB2 Connect for Queries on Siebel Analytics Server” on page 112](#)
- [“Setting the ORACLE_HOME Variable for Solaris” on page 112](#)
- [“About Environment Variables for IBM AIX” on page 113](#)
- [“Configuring HP-UX Platforms With Oracle 9i Clients” on page 114](#)

Configuring IBM DB2 Connect for Queries on Siebel Analytics Server

IBM DB2 Connect does not support the option of automatically disconnecting when an application using it receives an interrupt request. If you are running a relational database that uses DB2 Connect workstation, then you must change the setting of the parameter `INTERRUPT_ENABLED`. This parameter must be set on any Siebel Analytics Server machine using DB2 as a data source.

This configuration is described in the procedure [“To configure the `INTERRUPT_ENABLED` parameter” on page 52](#).

Setting the ORACLE_HOME Variable for Solaris

If you are using some Oracle clients on Solaris, make sure that the `ORACLE_HOME` variable is set to specify 32-bit Oracle OCI libraries. The Oracle 9i client installation `lib` directory contains the 64-bit libraries, but Siebel Analytics only supports 32-bit operations.

To set the `ORACLE_HOME` variable for Oracle 9i clients

- 1 Specify the path to the lib32 directory in `LD_LIBRARY_PATH`, not the path to the lib directory.

```
setenv ORACLE_HOME /export/home/oracle/9202

setenv TNS_ADMIN /export/home

setenv PATH ${ORACLE_HOME}/bin:/opt/bin:${PATH}

setenv LD_LIBRARY_PATH ${ORACLE_HOME}/
lib:${LD_LIBRARY_PATH}:/opt/j2se/jre/lib/sparc
```

- 2 Run the following command:

```
setenv LD_LIBRARY_PATH export/home/oracle/9202/
lib32:${LD_LIBRARY_PATH}
```

- 3 From `$INSTALLDIR/Bin`, run the following command:

```
ln -s /export/home/oracle/9202/lib32/
libclntsh.so libclntsh.so.8.0
```

NOTE: Only certain specific versions of Oracle clients are supported. For more information, see *Siebel System Requirements and Supported Platforms*.

About Environment Variables for IBM AIX

The `sa.sh` script, and all AIX scripts for server and client environment variable settings, contain these environment variables for AIX:

```
export MW_GMA_VADDR=0xb0000000

export LDR_CNTRL='LOADPUBLIC@MAXDATA=0x60000000'

export AIXTHREAD_SCOPE=S

export AIXTHREAD_MNRATIO=1:1

export AIXTHREAD_MUTEX_DEBUG=OFF

export AIXTHREAD_RWLOCK_DEBUG=OFF

export AIXTHREAD_COND_DEBUG=OFF
```

```
export RT_GRQ=ON

export SPINLOOPTIME=1000

export YIELDLOOPTIME=4

export MALLOCMULTIHEAP=considersize,heaps:4

export MALLOCTYPE=buckets

export LDR_CNTRL='LOADPUBLIC@MAXDATA=0x50000000'
```

NOTE: If you do not use the sa.sh shell script to start the server, you must make certain that the variables are set. If the variables are not set, you can expect poor performance from the Siebel Analytics Server.

In addition to these settings, the sa.csh script has the following settings:

```
setenv NLS_TERRITORY AMERICAN

setenv NLS_LANG English
```

These are not appropriate locale settings for international users of Siebel Analytics with Oracle. You may need to modify this script for your locale requirements.

Configuring HP-UX Platforms With Oracle 9i Clients

Make this change only for HP-UX platforms using Oracle 9i clients.

To configure HP-UX platforms using Oracle 9i clients

- 1 Specify the path to the lib32 directory in SHLIB_PATH, not the path to the lib directory.

The Oracle 9i client installation lib directory contains the 64-bit libraries, but Siebel Analytics only supports 32-bit operations.

Here is an example of these modifications:

```
/export/home/oracle/9.2.0.2/lib32:/vol1/hpbuild1/
SiebelAnalytics/Bin:/vol1/hpbuild1/SiebelAnalytics/mainsoft/
odbc/ux11/lib:/vol1/hpbuild1/SiebelAnalytics/mainsoft/mw/lib-
```

```
ux11:/vol1/hpbuild1/SiebelAnalytics/mainsoft/mw/lib-  
ux11_optimized:/vol1/hpbuild1/SiebelAnalytics/setup:/opt/j2se/  
jre/lib/
```

- 2 Modify the setting of the SHLIB_PATH in the user.sh or user.csh file so that the path to the lib32 directory appears at the beginning.

- a For user.sh:

```
SHLIB_PATH=$ORACLE_HOME/lib32:$SHLIB_PATH:/opt/j2se/jre/  
lib/hp700
```

- b For user.csh:

```
setenv SHLIB_PATH ${ORACLE_HOME}/lib32:${SHLIB_PATH}:/opt/  
j2se/jre/lib/hp700
```

Configuring a New Installation on UNIX Platforms

There may be times when you wish to configure a new installation or to reconfigure the configuration settings with your changes to the registry files, such as sa.reg.

To configure a new installation or to reconfigure the configuration settings

- Run one of the following scripts.
 - If you are using sh or bash, run

```
sa-init.sh
```

- If you are using csh, run

```
sa-init.csh
```

About Configuring the Siebel Analytics Server

The Siebel Analytics Server software uses an initialization file to set parameters upon startup. This initialization file is the NQConfig.INI file. It includes parameters to customize behavior based on the requirements of each individual installation. This file is located in `$INSTALLDIR/Config` directory.

To edit the *NQSCONFIG.INI* initialization file

- Use a text editor to edit this file.

These are examples:

```
vi $NQSCONFIG.INI
textedit $NQSCONFIG.INI
```

For information about the initialization parameters, see [Appendix A, “NQSCONFIG.INI File Reference.”](#) The examples in the chapter assume you are editing a Windows version of this file, so make the necessary substitutions in terms of UNIX file system paths and conventions.

Siebel Analytics Executable Files

The *\$INSTALLDIR/Bin* directory contains all of the executable files invoked by Siebel Analytics Server components, as well as some utilities that are described in *Siebel Analytics Server Administration Guide*. It also contains some command-line utilities, listed in the following section.

CAUTION: It is recommended that you contact Siebel Technical Support *before* using any of the utilities listed in the following section. Some are not supported, and can damage your data or Siebel Analytics installation if not used properly. Use these utilities with caution.

Siebel Analytics Command Utilities

The Siebel Analytics command utilities are:

- nQcmd.exe
- NQSCChangePassword.exe
- nQSecUDMLGen.exe
- nQSShutDown.exe
- nQUUDMLCli.exe

- nQUDMLExec.exe
- nQUDMLGen.exe
- SchConfig.exe
- SchShutdown.exe

Troubleshooting the Siebel Analytics Installation on UNIX

This section details some common problems observed during installation and suggests possible solutions. To resolve the problem, look for it in the Symptom/Error Message column in [Table 9](#).

Table 9. Common Problems and Solutions During Installation

| Symptom/Error Message | Diagnostic Steps/Cause | Solution |
|--|---|---|
| Charts do not appear. | Analytics Web is unable to communicate with Corda PopChart Image Server (PCIS). | <ol style="list-style-type: none"> 1 Make sure that PCIS is running. 2 Make sure that the port value of PCS_Port in <code>\$INSTALLDIR/Corda51/config/server_config.txt</code> is the same as the port number specified in the <code>\$INSTALLDIR/Data/web/config/instanceconfig.xml</code> setting: <code>WebConfig/ServerInstance/Charts/POP/ServerPrefix</code>. 3 Make sure that the Web or application server's name is valid and accessible from the user's browser. <p>Note that it is possible for Analytics Web and PCIS to run on separate machines, but for administrative as well as performance reasons, it is recommended that they be installed on the same machine.</p> |
| Charts do not appear in Delivers and running iBots appear to hang. | PCIS has not been configured properly. | Make sure that you can see charts outside of Delivers; for example, in Answers or on other dashboards. If charts are otherwise visible, contact Siebel Technical Support. |

Table 9. Common Problems and Solutions During Installation

| Symptom/Error Message | Diagnostic Steps/Cause | Solution |
|--|---|--|
| When starting the Scheduler, you receive an error. | Set the DISPLAY variable for Scheduler. | For standard and k shells: <pre>export DISPLAY=ip_address:0</pre> For the C shell: <pre>setenv DISPLAY=ip_address:0</pre> |
| No Login Screen - No Errors. | Incorrect configuration or incomplete shutdown/memory allocation. | <ul style="list-style-type: none">■ Make sure that Web Server is running.■ Make sure that the empty.htm file in the installed virtual directory can be accessed from a browser. If this fails, the virtual directory path is incorrectly defined.■ Shutting down the server and Web Server usually requires that the script mwcleanup be executed prior to restarting. |
| No login Screen - Web Server errors. | Conflicting ports used | Make sure that the Analytics Web does not use the same port numbers as existing software (for example, accidentally picking the same port number as an existing Web Server). |
| No Login Screen - Analytics Server restarted. | Analytics Web lost connection to the Analytics Server | Ideally, Analytics Web should be shut down prior to the server, and restarted after the Siebel Analytics Server has been restarted. |

Installing the Siebel Analytics Cluster Server Feature

3

This chapter provides the steps to install the Siebel Analytics Cluster Server feature. It contains the following topics:

- [“Installation Requirements for the Cluster Server Feature” on page 122](#)
- [“Process of Installing the Siebel Analytics Clustering Feature” on page 122](#)
- [“Process of Clustered Server, Clustered Client, and Cluster Controller Configuration” on page 126](#)

For a list of hardware requirements for clustered Siebel Analytics Servers, cluster controllers, and the shared file system used as the Siebel Analytics repository publishing directory, see *Siebel System Requirements and Supported Platforms*.

About Cluster Controller Setup

Figure 1 on page 121 shows a typical small cluster server setup.

It consists of:

- The primary cluster controller server
- The secondary cluster controller server
 - Services new ODBC requests
 - Monitors the health of the Siebel Analytics Server nodes that participate in this cluster

When a new ODBC request comes into either the primary or secondary cluster controller server, the following events occur:

- One of the cluster controller servers responds with a Siebel Analytics Server name and port number.
- The ODBC client uses this returned Siebel Analytics Server name and port number to connect to the Siebel Analytics Server directly.
- The ODBC request goes through the Siebel Analytics Server `CLIENT_SERVER_PORT` (9703 in Figure 1).
- The session assignment goes to the primary cluster controller's `CLIENT_CONTROLLER_PORT` (9706 in Figure 1).

The cluster controller servers monitor the Siebel Analytics Server nodes' health by using a heartbeat mechanism through TCP/IP to verify that the Siebel Analytics Server node is still functioning properly.

- The Siebel Analytics Server node includes a Server Manager and Siebel Analytics Server.
- The Server Manager starts, stops, and restarts the Siebel Analytics Server on behalf of the cluster controller server.
- Each Siebel Analytics Server node loads the repository, so the server knows which database to get data from.

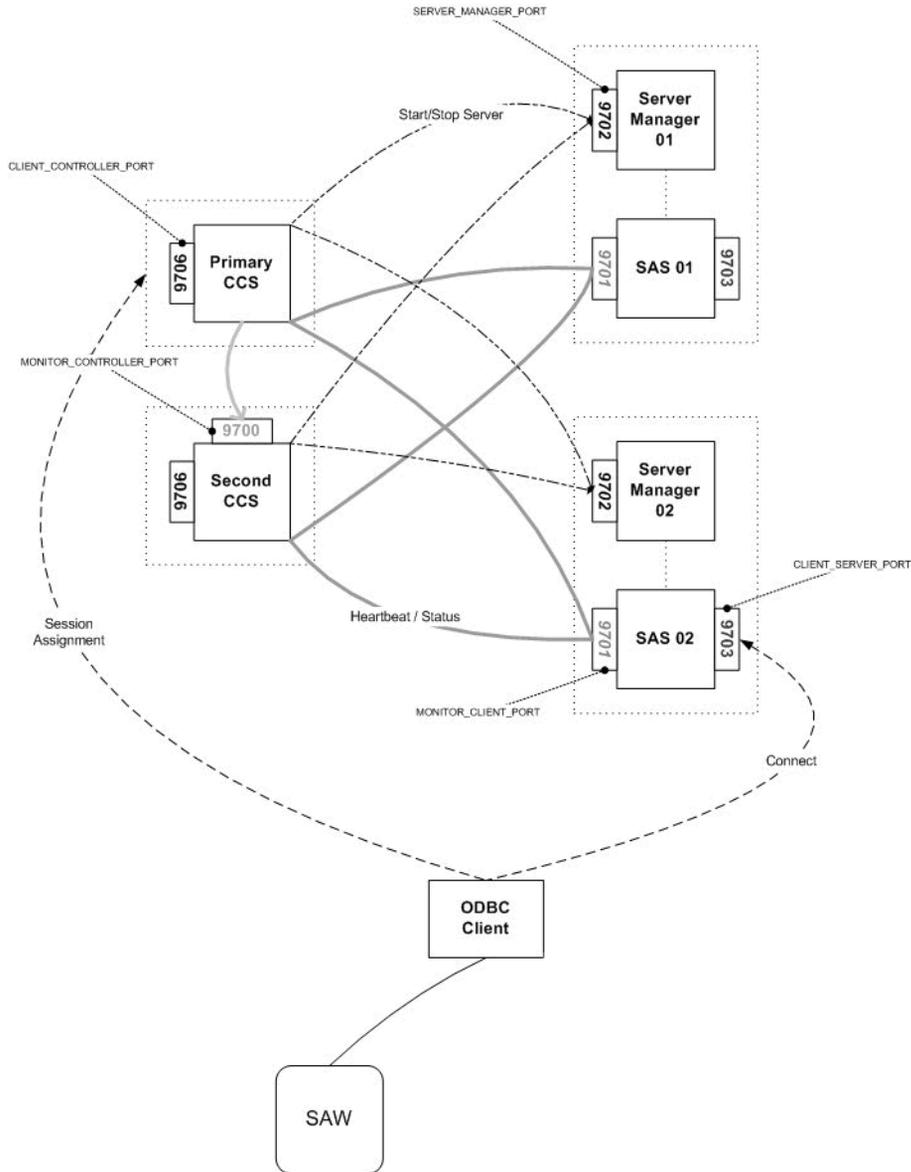


Figure 1. A Typical Cluster Controller Server/Client Setup

Installation Requirements for the Cluster Server Feature

These are additional considerations when installing the Siebel Analytics Cluster Server feature.

- All Siebel Analytics Server and cluster controller computers participating in the cluster need to run identical versions of the Siebel Analytics software.
- All computers participating in the cluster need to be within the same domain and on the same LAN subnet. Geographically separated computers are not supported.
- If data source names (DSN) are used in the connection pools, these DSN should point to the same data source on each of the Siebel Analytics Servers that participate in the cluster. That is, the connection pool DSN should be the same on each Siebel Analytics Server node in the cluster.
- When configuring the cluster, configure one repository first, and then copy it to the other Siebel Analytics Servers participating in the cluster.
- The clock on each server participating in a cluster must be kept in synchronization. Out-of-sync clocks can skew some cluster-related reporting.
 - On Windows use a software program to do this.
 - On UNIX, use a time daemon such as NTP to do this.

Process of Installing the Siebel Analytics Clustering Feature

In the Windows environment, perform the steps in the following procedures to install the Siebel Analytics Cluster Server feature:

- [“Identifying the Clustering Components” on page 123](#)
- [“Granting the Log On as a Service Right Under Windows NT” on page 123](#)
- [“Granting the Log On as a Service Right Under Windows 2000” on page 124](#)
- [“Installing the Siebel Analytics Clustering Feature” on page 125](#)

Identifying the Clustering Components

This procedure identifies the components of the cluster controller.

To identify the clustering components

- 1** Identify the computer that will host the primary cluster controller and optionally, which computer will host the secondary cluster controller. See the parameters [“PRIMARY_CONTROLLER” on page 308](#) and [“SECONDARY_CONTROLLER” on page 308 in Appendix B, “NQClusterConfig.INI File Reference.”](#)
- 2** Identify each computer that will host a clustered Siebel Analytics Server. See the parameter [“SERVERS” on page 309 in Appendix B, “NQClusterConfig.INI File Reference.”](#)
- 3** Identify a Domain account under which all clustered Siebel Analytics Servers and cluster controllers will run. This account should be a member of the local Windows Administrators group on each computer in the cluster. Do not use the LocalSystem account.

This Domain account must have read and write access to the repository publishing directory (specified in the parameter [“REPOSITORY_PUBLISHING_DIRECTORY” on page 293](#) in the NQConfig.INI file).

Granting the Log On as a Service Right Under Windows NT

This Domain account must also have the Log On as a service right. Members of the Administrators group do *not* have this right by default. If the cluster controllers are running under a Windows NT operating system, grant the Log On as a service right explicitly to this account on each computer using the following method.

To grant the Log On as a service right under Windows NT

- 1** Choose Start > Programs > Administrative Tools (Common) > User Manager. This opens the User Manager window.
- 2** From the Policies menu, choose the option User Rights. This opens the User Rights Policy window.

- 3** Select the option Show Advanced User Rights and, from the drop-down list, select the Log On as a service right. Click Add. This opens the Add Users and Groups window.
- 4** In the List Names From drop-down list, select the domain the account is in, and then click Show Users.
- 5** Locate the account in the list and click Add. The domain and account should be shown in the Add Names window.
- 6** Click OK to return to the User Rights Policy window, which shows the Log On as a service right, and the domain and account in the Grant To window.
- 7** Click OK to return to the User Manager window and close the window.

Granting the Log On as a Service Right Under Windows 2000

This Domain account must also have the Log On as a service right. Members of the Administrators group do *not* have this right by default. If the cluster controllers are running under a Windows 2000 operating system, grant the Log On as a service right explicitly to this account on each computer using the following method.

To grant the Log On as a service right under Windows 2000

- 1** Choose Administrative Tools from the Control Panel and double-click Local Security Policy. This opens the Local Security Settings window.
- 2** Expand the Local Policies tree in the left pane and double-click User Rights Assignment.
- 3** Locate the Log On as a service right, double-click it to open the Local Security Policy Setting window, and click Add. This opens the Select Users, Computers, or Groups window.
- 4** From the Look In drop-down list, select the domain that the account is in. Locate the account in the Name list, highlight it, click Add, and click OK.
- 5** Click OK again to return to the Local Security Settings window. You should see that the Log On as a service right has been added to the account. Close this window.

Installing the Siebel Analytics Clustering Feature

Perform the following procedure on each computer that is to host a Siebel Analytics cluster controller.

To install the Siebel Analytics clustering feature

- 1** In the Setup Type window, select the Custom option, and then select the Siebel Analytics Cluster feature. All other options are selected by default in this screen; you can deselect the options you do not want to install. For example, if this computer is to host a Cluster Controller only, the Cluster Controller feature is the only feature you need to install.
- 2** Install the Siebel Analytics software according to the procedure in [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment.”](#)

In the Setup Type window, you can select the Server option, the Complete option or the Custom option, depending on the Siebel Analytics components you want to install on that particular computer. For example, if a computer will host both a Siebel Analytics Server and a Cluster Controller, select the Custom option, and then select the Siebel Analytics Cluster feature (all other features are selected by default in this screen).

- 3** Complete the installation. Reboot the computer when prompted. Please note that, using the default configuration created by the installation process, the Cluster Controllers will fail to start. You can ignore this, because it is addressed in subsequent steps.
- 4** Copy any required repository files to the Repository subdirectory in the Siebel Analytics software installation directory on each computer. All Siebel Analytics Servers in the cluster must have identical copies of all repository files.
- 5** Install and configure any necessary relational database access packages (for example, sites using SQL Server would need to configure SQL Server DSN referenced by the repositories).

Process of Clustered Server, Clustered Client, and Cluster Controller Configuration

After installing the Clustering feature, you need to configure the Siebel Analytics Servers and cluster controllers that will participate in a cluster.

This section includes the following tasks:

- [“Configuring Clustered Servers and Cluster Controllers” on page 126](#)
- [“Configuring a Clustered ODBC on UNIX” on page 128](#)

NOTE: When you are using the Siebel Analytics Server Administration Tool and have a repository open, you can use the Cluster Manager to monitor and manage the operations of the cluster, including starting and stopping Siebel Analytics Servers and Cluster Controllers. Access the Cluster Manager by choosing the menu option Manage > Clusters. For more information, see *Siebel Analytics Server Administration Guide*.

Configuring Clustered Servers and Cluster Controllers

This procedure explains how to configure the clustered servers and cluster controllers.

To configure clustered servers and cluster controllers

- 1 Stop any Siebel Analytics Servers and cluster controllers that are running. This can be done from the Services control panel applet on each computer, or by using the net command from a Windows command window; for example:

```
net stop "Siebel Analytics Server"  
net stop "Siebel Analytics Cluster"
```

- 2 On each computer that is hosting a Siebel Analytics Server, edit the NQSConfig.INI file located in the Config folder in the Siebel Analytics software installation folder and set the parameter “[CLUSTER_PARTICIPANT](#)” on page 293 to Yes. Uncomment and supply valid values for the parameters “[CLUSTER_PARTICIPANT](#)” on page 293 and “[REPOSITORY_PUBLISHING_DIRECTORY](#)” on page 293. See [Appendix A](#), “[NQSConfig.INI File Reference](#).”

Non-clustering parameters, such as those set in the Cache and Repository sections of the NQSConfig.INI file, should be substantially identical across all Siebel Analytics Servers in a cluster. You may find it easiest to edit one copy of the NQSConfig.INI file and then copy it to the Config folders of the remaining computers, and then make computer-specific changes where necessary.

The default client/server communication method for Siebel Analytics Server is TCP/IP. If the Siebel Analytics Server is to communicate with a DCOM-based client, the `MAX_SESSION_LIMIT` and `CLIENT_SERVER_SHARED_MEMORY_SIZE` parameters in the NQSConfig.ini file must be updated on every clustered Siebel Analytics Server:

```
MAX_SESSION_LIMIT = 100 ; // May be increased, but if set too
high, will cause server startup to fail.

CLIENT_SERVER_SHARED_MEMORY_SIZE = 32 KB ;
```

- 3 Edit one copy of the NQClusterConfig.INI file to supply valid values for the clustering parameters. For detailed instructions, see [Appendix B](#), “[NQClusterConfig.INI File Reference](#).”
- 4 Copy the NQClusterConfig.INI file to the Config folders of each computer hosting a Siebel Analytics Server or a Cluster Controller.
- 5 Configure Siebel Analytics Server data source names for clustering, using the wizard described in *Siebel Analytics Server Administration Guide*. See *Siebel Analytics Server Administration Tool Online Help*.
- 6 Manually start all the Siebel Analytics Server and Siebel Analytics Cluster Server services in the cluster. This can be done from the Services control panel applet on each computer, or by using the net command from a Windows command window.

For example, use:

```
net start "Siebel Analytics Server"  
  
net start "Siebel Analytics Cluster"
```

You can also use a third-party tool designed for remote service manipulation.

- 7 Use a text editor to examine the NQServer.log file and the NQCluster.log in the Log folders, and verify that all computers started without errors and joined the operational cluster configuration successfully. Correct any errors noted in the log files and start the computers again.

NOTE: The log entries are written in UTF-8 format. To view the contents of these files, set your viewer to UTF-8. If you do not, you may see garbled text.

Configuring a Clustered ODBC on UNIX

To set up clustering on UNIX, you must modify the `$INSTALLDIR/setup/odbc.ini` file to include a new DSN.

The following is an example of a clustering DSN in the `odbc.ini` file:

```
[clusterdsn]  
Driver=>/export/home/SiebelAnalytics/Bin/libnqsodbc.so  
Description=Siebel Analytics Server  
ServerMachine=local  
Repository=  
FinalTimeOutForContactingCCS=60  
InitialTimeOutForContactingPrimaryCCS=5  
IsClusteredDSN=Yes  
Catalog=SnowFlakeSales  
UID=Administrator  
PWD=  
Port=9703  
PrimaryCCS=primaryhostname  
PrimaryCCSPort=9706  
SecondaryCCS=secondaryhostname  
SecondaryCCSPort=9706
```

NOTE: The primary CCS and secondary CCS should not be on the same machine.

```
Regional=No
```

Forcing Siebel Analytics Web to Use the Clustered ODBC

In order to use Siebel Analytics Web with clustering, you must use separate procedures for each operating system platform.

1 UNIX

To use clustering under UNIX

- 1 Modify the `$INSTALLDIR/Data/web/config/instanceconfig.xml` file to use the data source name (DSN) that was created in [“Configuring a Clustered ODBC on UNIX” on page 128](#). (See also the section on working in the Siebel Analytics Web configuration file in *Siebel Analytics Web Administration Guide*.)
- 2 To use the new clustered DSN, restart Siebel Analytics Web and the Web Server.

■ Windows

To use clustering under Windows

- 1 Using the wizard described in *Siebel Analytics Server Administration Guide*, create a clustered data source name.

Note the name of the clustered DSN.

- 2 Using regedit, open the registry file. Modify (HKEY_LOCAL_MACHINE\SOFTWARE\Siebel Systems, Inc.\Siebel Analytics\Web\7.7\DSN) to be the name of the clustered DSN that you have just created.
- 3 Restart Siebel Analytics Web and IIS to use the new clustered DSN.

Installing the Siebel Analytics Cluster Server Feature

Process of Clustered Server, Clustered Client, and Cluster Controller Configuration

Installing the Disconnected Analytics Client and Briefing Book Reader

4

Siebel Disconnected Analytics Client and Siebel Analytics Briefing Book Reader permit the use of Siebel Analytics data on a laptop while not connected to the network-based Siebel Analytics Server. The topics covered in this chapter are:

- [“Installing the Siebel Analytics Disconnected Client”](#)
- [“Installing Briefing Book Reader” on page 135](#)

NOTE: Siebel Disconnected Analytics Client and Siebel Analytics Briefing Book Reader are Windows-only applications.

Installing the Siebel Analytics Disconnected Client

Siebel Disconnected Analytics Client allows mobile users to access data and reports when not connected to the network-based Siebel Analytics Server. You install the Siebel Disconnected Analytics Client on laptop computers.

NOTE: Siebel Disconnected Analytics Client is not to be confused with the enterprise (Siebel Analytics Server) installation. See also the information on setting up Disconnected Analytics in *Siebel Analytics Server Administration Guide*. For information about how mobile users typically use the Disconnected Analytics Client, see *Disconnected Analytics Online Help*.

When you run the Siebel Analytics installer wizard you are prompted to select the setup type. If you purchased Siebel Disconnected Analytics, the installer detects this from the license key information you select during installation and displays the Disconnected Client option.

CAUTION: You cannot install the Disconnected Analytics Client at the same time as the rest of the Siebel Analytics components. Also, you cannot install the Disconnected Client on the same machine with Siebel Analytics. You must install them on two separate machines.

To install the Siebel Analytics Disconnected Client

- 1** Access the installation files, and run the program Setup.exe.
- 2** The installation wizard window appears and prompts you through each screen. To continue to the next screen, click Next. If you need to return to a previous screen, click Back.

| Screen | Your Action |
|--|---|
| Welcome | Click Next. |
| License Agreement | Select “I accept ...” and click Next. |
| License File | The License file is an XML file corresponding to the installation type you are licensed for. This file is emailed to you, or installed on your corporate server. Select the appropriate XML file in the License File screen (for example, HorizontalDisc.xml). Click Next. |
| Installation Directories | To change the default installation drive (recommended), click browse and establish the installation path, then click Next. |
| Setup Type | Choose the option Disconnected Client. Click Next. |
| Selection Error Message Language | The error messages from the Siebel Analytics Server are in one language only. Typically, these are back-end server side messages only. The Siebel Analytics Administrator can choose which language to display these messages in. The default is English. Click Next. |
| Wait | Placeholder screen appearing while the installer accepts all the choices you have made. Click Next. |
| Summary Information (pre-installation) | A list of the Disconnected Client components and the directory where they will be installed. Confirm that this information is correct. Click Next. |
| Installing | Placeholder screen that appears while the installer installs all the features you have selected. Click Next when done. |

Installing the Disconnected Analytics Client and Briefing Book Reader

Installing the Siebel Analytics Disconnected Client

| Screen | Your Action |
|--|---|
| Summary Information (post-installation) | Acknowledgement that the installation wizard has finished installing Siebel Analytics. Click Next. |
| Restart Computer | Choose whether or not to immediately restart your computer and click Finish. If you click Yes, the computer will shut down and restart. If you click No, you will need to restart the computer before you use Siebel Analytics. |

NOTE: The standard Siebel Analytics Server installation must be on a network machine in order to work with Disconnected Analytics.

Installing Briefing Book Reader

Siebel Analytics Briefing Book Reader is a Windows application that provides a means to save static and linked dashboard content for review offline. Users specify dashboard pages for immediate or scheduled download. Key reports and dashboards can be reviewed and evaluated while disconnected from the network.

The installation program for Briefing Book Reader is located on the Siebel Analytics Windows installation CD-ROM.

To install the Siebel Analytics Briefing Book Reader under Windows

- 1** From the installation CD-ROM folder BriefingBookReader, or from the network location that contains the Briefing Book Reader files, run the program `Win32Setup.exe`.
- 2** The installation wizard window appears and prompts you through each screen. To continue to the next screen, click Next. If you need to return to a previous screen, click Back.

| Screen | Your Action |
|--|---|
| Welcome | Click Next. |
| License Agreement | Select "I accept..." and click Next. |
| Installation Directories | To accept the default installation (to the C:\ drive), click Next. To change the default (recommended), click browse and establish the installation path, then click Next. |
| License File | The License file is an XML file corresponding to the installation type you are licensed for. This file is emailed to you, or installed on your corporate server. Select the appropriate XML file in the License File screen. Click Next. |
| Summary Information (pre-installation) | The directory where Briefing Book Reader will be installed is shown. Click Next. |

Installing the Disconnected Analytics Client and Briefing Book Reader

Installing Briefing Book Reader

| Screen | Your Action |
|---|---|
| Installing | Placeholder screen that appears while the installer installs all the features you have selected. Click Next when done. |
| Summary Information (post-installation) | Acknowledgement that the installation wizard has finished installing Siebel Analytics Briefing Book Reader. Click Finish to exit the installation wizard. |

For information on creating and using Briefing Books, see *Siebel Analytics Web Administration Guide*.

This chapter assumes you are familiar with *Security Guide for Siebel eBusiness Applications* (on *Siebel Bookshelf*), especially the user authentication, basic access control, and data-level security sections.

The basic user authentication methods used by all implementations of Siebel Analytics, Stand-Alone or Integrated, is described in the following sections:

- [“About User Authentication in Siebel Analytics Applications” on page 137](#)
- [“About LDAP and ADSI Authentication in Siebel Analytics” on page 138](#)
- [“Configuring LDAP and ADSI Authentication in Siebel Analytics” on page 138](#)

For information about how Siebel Analytics integrates security when working with Siebel operational applications (Siebel eBusiness Applications and Siebel Industry Applications), see [Chapter 9, “Integrated Security in Siebel Operational Applications and Siebel Analytics.”](#)

About User Authentication in Siebel Analytics Applications

Authentication is separate from permission security. Siebel Analytics applications support three methods of authentication:

- Database authentication
- LDAP (Lightweight Directory Access Protocol) server authentication

Siebel Analytics Server supports LDAP in both Secure Socket Layer (SSL) and regular (non-SSL) modes. An LDAP server treats Siebel Analytics Server as a regular LDAP client.

- ADSI (Active Directory Service Interfaces) authentication

Siebel Analytics Server supports ADSI only in regular (non-SSL) mode under both UNIX and Windows platforms.

The Siebel Analytics repository is preconfigured for database authentication.

About LDAP and ADSI Authentication in Siebel Analytics

LDAP authentication uses Siebel Analytics session variables, which you define using the Administration Tool's Variable Manager. Session variables get their values when a user begins a session by logging on. Certain session variables, called system session variables, have special uses. The variable USER is a system variable that is used with LDAP authentication. Instead of storing user names and passwords in a Siebel Analytics Server repository, the Siebel Analytics Server passes the user's user name and password to an LDAP server for authentication. (For more information about session variables, the USER system variable, and the Variable Manager, see the appropriate topics in *Analytics Server Administration Tool Online Help*.)

In addition to basic user authentication, the LDAP server also provides Siebel Analytics Server with other information, such as the user display name (used by Siebel Analytics Web) and the name of any groups to which the user belongs. The LDAP server also provides the names of specific database catalogs or schemas to use for each user when querying data. This information is contained in LDAP variables, which get passed to Siebel Analytics session variables during the process of user authentication.

Configuring LDAP and ADSI Authentication in Siebel Analytics

If you use an LDAP server to authenticate your users, follow these procedures. The process of LDAP and ADSI authentication involves the following tasks:

- Confirming that IBM's GSKit (Global Security Kit) is installed and configured. GSKit provides the support for Secure Sockets Layer. (Refer to the supported version of the Java runtime engine in *Siebel System Requirements and Supported Platforms*.)

This book assumes you already have GSKit installed. If it is not, see the section [“Installing and Uninstalling GSKit” on page 143](#).

- [“Configuring GSKit” on page 139](#).

Use the GSKit utility IkeyMan to create a key database file, and store it under Siebel Analytic configuration directory.

- [“Generating a CMS Key Database File” on page 141](#).
- [“Setting Up LDAP Authentication” on page 142](#).

Configuring GSKit

GSKit supports Secure Sockets Layer. GSK uses a Java-based tool, IBM's IKeyMan Version 6.0, to create key database files for LDAP authentication over SSL. A key database file stores digital certificates based on the X.509 standard.

IKeyMan 6.0 can generate several kinds of key database files, but an LDAP client can use only key database files of the CMS type. The extension of this file type is .kdb.

To configure IKeyMan to enable creation of CMS key database files

- 1 Install an IBM or an IBM-equivalent JDK.

NOTE: The correct version of Java is required for IKeyMan to work properly. See *Siebel System Requirements and Supported Platforms* for the correct version to use.

- 2 Set JAVA_HOME to point to the directory where JDK was installed. For example:
 - On Windows, set JAVA_HOME = C:\Program Files\IBM\Java13.
 - On UNIX, export JAVA_HOME = /usr/opt/IBMJava13.

- 3 Remove the `gskikm.jar` and `ibmjcaprovider.jar` files from your `${JAVA_HOME}/jre/lib/ext` directory.
- 4 Make sure that `${JAVA_HOME}/jre/lib/ext` directory has the following jar files:
 - `ibmjceprovider.jar`
 - `ibmpkcs.jar`
 - `ibmjcefw.jar`
 - `local_policy.jar`
 - `US_export_policy.jar`
 - `ibmjlog.jar`

Look for these jar files and for `ibmjssse.jar` under GSKit installation `path\classes\jre\lib\ext`. Copy GSKit jar files to the `${JAVA_HOME}/jre/lib/ext` directory.

- 5 Register IBM JCE and IBM CMS service providers.

Update the `${JAVA_HOME}/jre/lib/security/java.security` file to add the IBMJCE provider and IBMCMS provider after the Sun provider. For example:

- `security.provider.1 = sun.security.provider.Sun`
- `security.provider.2 = com.ibm.spi.IBMCMSProvider`
- `security.provider.3 = com.ibm.crypto.provider.IBMJCE`

A sample `java.security` file for GSKit user can be found in GSKit Installation path `\classes\gsk_java.security`.

About CMS Key Database Files

An LDAP server usually allows two kinds of authentication over SSL:

- Server authentication
- Server and client authentication

Siebel Analytics Server uses server authentication, and you must configure your LDAP server to allow client-side server authentication.

For server authentication, you generate a CMS key database file with the Certificate Authority (CA) certificate and mark it as trusted. The CA is also the CA that issued the LDAP server's certificate.

Generating a CMS Key Database File

The utility for generating a CMS key database is IkeyMan, located in the `gskit\bin` directory.

NOTE: Be sure that you complete the configuration of GSKit and set up the `JAVA_HOME` before running the key-generation command.

To generate a CMS key database file

- 1** Run `gsk6ikm.exe` on Windows or `gsk6ikm` on UNIX.
- 2** Enter a password.

NOTE: Do not check the box Stash the password to a file, because the password is entered in an LDAP object in the repository file.

- 3** For details on generating a key database file, see the IBM Directory Server administration guide's chapter on securing the directory, in the section on using `gsk6ikm`.

NOTE: If you are using non-IBM LDAP server for authentication, you follow similar steps to obtain the LDAP server's certificates. If you do not have the separate server certificate file and it is already stored in the LDAP server, you can export the server certificates to a file and then import with IKeyMan into a CMS key database file.

After creating the CMS key database file, you need to store it in the Siebel Analytics Server configuration directory.

Setting Up LDAP Authentication

To configure LDAP authentication, you define a system variable called `USER` and associate it with an LDAP initialization block, which in turn is associated with an LDAP server. Whenever a user logs into Siebel Analytics Server, the user name and password are passed to the LDAP server for authentication. Once the user is authenticated successfully, other session variables for the user could also be populated from information returned by the LDAP server.

The presence of a defined session system variable `USER` determines that external authentication is done. Associating `USER` with an LDAP initialization block determines that the user will be authenticated by LDAP. To provide other forms of authentication, you associate the `USER` variable with an initialization block associated with an external database or XML source. (For details, see the topic on external table authentication in *Analytics Server Administration Tool Online Help*.)

NOTE: This procedure assumes that an LDAP initialization block has already been defined. Setting up an LDAP initialization block is explained in *Analytics Server Administration Tool Online Help*.

To define the `USER` session system variable for LDAP authentication

- 1** Select `Manage > Variables` from the Administration Tool menu.
- 2** Select the `System` leaf of the tree in the left pane.
- 3** Right-click the right pane and select `New USER`.
- 4** In the `Session Variable - User` dialog box, select the appropriate LDAP initialization block from the `Initialization Block` drop-down list.

The selected initialization block provides the `USER` session system variable with its value.

- 5** Click `OK` to create the `USER` variable.

Installing and Uninstalling GSKit

If it is necessary for you to install GSKit, follow the procedure appropriate for the operating system you are using.

Installing GSKit on Windows

You install GSKit on the machine where Siebel Analytic Server resides.

To install GSKit on Windows

- 1 Unzip the file P510W-01A.zip under the directory GSK to a temporary directory.
- 2 Follow the instructions in P510W-01AReadme.txt.

NOTE: For `gsk6bas.exe` to run successfully, choose a directory whose name is not longer than 8 characters as the working directory. For example, `C:\temp`.

By default, the GSKit is installed under `C:\Program Files\IBM\GSK6`.

- 3 Verify that windows registry has been updated correctly with IBM GSKit keys:

```
HKEY_LOCAL_MACHINE\SOFTWARE\IBM\GSK6\CurrentVersion\Version =  
6.0.4.41
```

Installing GSKit on AIX

You install GSKit on the machine where Siebel Analytic Server resides. By default, the GSK is installed under `/usr/opt/ibm/gskak`.

To install GSKit on AIX

- 1 Log in as root.
- 2 Unzip the file P510A-01A.tar.Z under the directory GSK to a temporary directory:

```
zcat P510A-01A.tar.Z | tar xvf -
```

- 3 List the package for verification.

```
installp -ld `pwd`/gskak.rte
```

A list all of the installable IBM GSK packages is displayed.

```
gskak.rte 6.0.5.34 I N usr
# AIX Certificate and SSL Base Runtime ACME Toolkit
```

- 4 At the command prompt, install the required package with the following command:

```
installp -acgXd `pwd`/gskak.rte gskak.rte
```

where

-a stands for *apply*

-c stands for *commit*

-g installs prerequisites if necessary

-X increases the file system space if needed

-d stands for *device*

- 5 Verify that GSKit was installed successfully with this command:

```
lsllpp -L | grep gsk
```

The output lists all the filesets starting with gsk. For example:

```
gskak.rte 6.0.5.34 C F AIX Certificate and SSL Base
```

Uninstalling GSKit on AIX

You can uninstall GSKit using the following procedure.

To uninstall GSKit on AIX

- Log in as root and run the command:

```
installp -u gskak.rte
```

Installing GSKit on Solaris

You install GSKit on the machine where Siebel Analytic Server resides. By default, the GSK is installed under `/opt/ibm/gsk6`.

To install GSKit on Solaris

- 1 Log in as root.
- 2 Copy the file `gskit604d-solaris.tar` under the GSK directory to a temporary directory.
- 3 Unpack the tar file.

```
tar xvf gskit604d-solaris.tar
```

- 4 Unpack the tar.Z file

```
zcat gsk6bas.tar.Z | tar xvf -
```

- 5 Install GSKit 6.0.

```
pkgadd -d . gsk6bas
```

- 6 Verify the installation using this command:

```
pkginfo|grep gsk6bas
```

You may also install GSKit following the instructions in `P510W-01AReadme.txt`.

Uninstalling GSKit on Solaris

Uninstall the GSKit using the following procedure.

To uninstall GSKit on Solaris

- Log in as root and run the following command:

```
pkgrm gsk6bas
```

Installing GSKit on HP-UX

You install GSKit on the machine where Siebel Analytic Server resides. By default, the GSK is installed in `/opt/ibm/gsk6`.

When you use LDAP authentication over SSL on HP-UX, at the login time you may see an error message such as:

```
/usr/lib/dld.sl: Can't find path for shared library:  
libgsk6ssl.sl
```

To avoid this, add `/usr/lib` explicitly to the `SHLIB_PATH` environment variable in the Siebel Analytic Server start-up script.

To install GSKit on HP-UX

1 Copy the file `gskit604d-hp.tar` under the GSK directory to a temporary directory.

2 Unpack the tar file:

```
tar -xvf gskit604d-hp.tar
```

This will create the `gsk6bas` directory.

3 Go to `gsk6bas` directory.

4 List the software available at the current location for verification:

```
swlist -s `pwd`
```

You should see files similar to these:

```
gsk6bas 6.0.4.41 IBM gsk6 RUNTIME KIT
```

5 Install the GSKit.

```
swinstall -s `pwd`
```

SD install GUI is displayed.

a Select `gsk6bas`.

b Select Actions > Mark For Install.

- c** Select Actions > Install.
Analysis is complete when the status field reads Ready.
 - d** Click OK.
 - e** Click Yes to begin installation. Installation is complete when the status fields reads Completed.
 - f** Click Done.
- 6** Exit SD install GUI.
- 7** Use swlist to see if software is installed on the machine:

```
swlist | grep gsk6bas
```

Uninstalling GSKit on HP-UX

Uninstall the GSKit using the following procedure.

To *uninstall GSKit on HP-UX*

- 1** Log in as root.
- 2** Run swremove.
- 3** SD Remove window appears.

NOTE: Make sure the environment variable DISPLAY is set correctly if you log in remotely.

- 4** Highlight gsk6bas.
- 5** Remove gsk6bas.

Internationalization Considerations Regarding Siebel Analytics

6

Siebel Analytics has been designed to allow users to dynamically change their preferred language and locale preferences. This chapter shows how to configure Siebel Analytics if you intend to deploy in one or more language environments besides English. In order to support multiple languages, the Siebel Analytics Server must be set up appropriately.

About Unicode Support in Siebel Analytics

Siebel Analytics itself supports Unicode. However, some third-party products and platforms may not fully support Unicode. For example, the charting image server for displaying charts in Analytics Web is unable to show East-Asian characters in its standard mode. Before you can see Asian characters in the Siebel Analytics Web charts, you must configure some charting templates and convert fonts. These tasks are described in [“Converting Chart Fonts for Siebel Analytics Web Charts”](#) and [“Adding Converted Fonts to Charting Image Server”](#) on page 150.

Converting Chart Fonts for Siebel Analytics Web Charts

This procedure converts a Unicode font for use with Corda PopChart. You use Corda Font Converter 5.0 to convert the desired TrueType font (TTF) to a Corda .fsd file.

To convert a font using the Corda Font Converter

- 1 Run CordaFontConverter.exe.

NOTE: This converter is in `$INSTALLDIR\Corda50\bin`.

- 2 From the Fonts window, select the font you want to convert. Select the conversion options, and display name.

- 3 Click convert.

The conversion may take a few minutes.

- 4 Click Exit.

To continue with the process of configuring the Web chart image server to display Asian fonts, see [“Adding Converted Fonts to Charting Image Server.”](#)

Adding Converted Fonts to Charting Image Server

This procedure adds a non-installed font to PopChart Image Server. You edit a Corda chart template (pcxml) to reference the newly converted font. The pcxml files describing various chart types are located in `$INSTALLDIR\Web\App\Res\s_Siebel17\PopBin`. Edit the pcxml files so that the converted font is referenced. Any text editor can be used.

NOTE: Back up this directory before editing any pcxml files.

To add a font to PopChart Image Server

- 1 Open the chart file (for example, pie.pcxml) in the text editor.
- 2 In the file, add the “Name” attribute wherever “Font” is specified.

By default, no font name is referenced in these files but a font size is.

For example, in pie.pcxml, to add the Arial font:

```
<Properties TransparentFill='True' BorderType='None'  
Font='Size:11; Style:Bold;'/>
```

you add the font name attribute so that the line reads:

```
<Properties TransparentFill='True' BorderType='None'  
Font='Name:Arial; Size:11; Style:Bold;'/>
```

- 3 Save and close the pcxml file.

To see the changes, stop and restart the Siebel Analytics Web Server and PopChart server.

Installing Localization Packs for Siebel Analytics

During your Siebel eBusiness application installation, you also should have installed a Siebel operational applications language pack. The language pack installation process populates the S_MSG table from seed data shipped with the Siebel operational application software. The languages available in the S_MSG table are the same as the language packs that you install. For more information on Siebel operational application language pack installation, refer to the server installation guide for the operating system you are using.

Changing Localization Variables in the Siebel Analytics Repository

If you have localized Siebel Analytics for one or more languages other than English, you must also configure these localizations in the Siebel Analytics repository (.rpd) file.

To configure localizations in the Siebel Analytics repository

- 1** Using the Siebel Analytics Administration Tool, open the .rpd file.
- 2** Go to Manage > Variables and edit the following variables:

| Variable Type | Variable Name | Change to ... |
|--------------------|----------------------------|---|
| Repository—Dynamic | OLTP_LANG_ID | Siebel three-letter language code |
| | DW_CURRENCY | OLTP Currency (for example, EUR) |
| | ETL Base Exchange Currency | OLTP Currency (for example, EUR) |
| Session—System | LOCALE | Siebel Analytics two-letter language code (shown in the LOCALE parameter entry of Appendix A, “NQSConfig.INI File Reference.”) |

Process of Upgrading Non-English Seed Data for Siebel Analytics

If your organization requires that Siebel Analytics data be viewed in a language other than English, you must also import Locale seed data into the Siebel transactional (OLTP) database. This data allows the Siebel Analytics applications metadata to be viewed in non-English languages.

NOTE: This procedure is only applicable to Siebel Analytics applications customers.

Because this data is normally part of the Siebel eBusiness Applications suite, you would have loaded part of this data when you installed the Siebel 7.5.x eBusiness application. This additional process updates the seed data and makes it current for the Siebel Analytics 7.7 applications. This process must be performed once for each language in which your data is to be viewed.

During the Siebel Analytics 7.7 installation, a folder, *\$INSTALLDIR\SeedData*, was created, which contains a folder for each language. Within each language folder is a .dat file (the data to be imported) and an .inp file (the WHERE clause governing the import).

NOTE: The procedure given in [“Importing Locale Seed Data Into the Siebel Transactional Database”](#) is shown again in [Chapter 7, “Integrating Siebel Analytics with Siebel Operational Applications.”](#) However, if the primary language being used is not English, you may have to import additional translations (depending on the number of languages you use) as shown in the following procedure.

Importing Locale Seed Data Into the Siebel Transactional Database

NOTE: This procedure should be performed by a Siebel Applications Administrator.

To import Locale seed data into the Siebel transactional database

- 1 Open a command window and navigate to *SINSTALLDIR\SeedData\bin* folder.

- 2 Run the import command in [Step 3](#) after replacing these connection parameters with the values appropriate to your database environment:

- Import parameters:
 - UserName
 - Password
 - ODBCDataSource
 - DatabaseOwner

- 3 Run the import command:

```
$INSTALLDIR\SeedData\bin\dataimp /u $UserName /p $Password /c
"$ODBCDataSource" /d $DatabaseOwner /f
$INSTALLDIR\SeedData\
```

NOTE: Replace the XX with the Siebel Analytics two-letter language code (_fr, _it) and the XXX with the Siebel Systems three-letter code (FRA, ITA).

- 4 When you have finished importing the Locale seed data into the OLTP database, you must configure database connectivity to the machine on which the Siebel Analytics Server resides.

Siebel Analytics Server uses the Siebel OLTP database in order to read the metadata translations. Configure the database connectivity on the Siebel Analytics Server machine to the OLTP database, so that the server can load the appropriate translations for the languages you are using.

NOTE: Unicode connectivity can be used to access databases that do not support Unicode.

About Siebel Operational Application Metadata Import Files

Because of differences in the metadata terminology between the Siebel Financial Services application and the metadata terminology of other Siebel operational applications, Siebel Financial Services customers running an implementation in ENU (English) must import the seed data as described in [“Importing Locale Seed Data Into the Siebel Transactional Database”](#) on page 152.

The files used in the importing of Siebel operational application metadata and seed data are shown in the following table (where XXX is the Siebel Systems three-letter code; for example FRA, ITA, DEU).

| File Name | Purpose of File |
|------------------------------------|---|
| Metadata_upgrade_ <XXX> _ora.inp | Set of import files used to control the import of the analytics_seed_ <XXX> .dat file to a particular database platform. |
| Metadata_upgrade_ <XXX> _mssql.inp | |
| Metadata_upgrade_ <XXX> _db2.inp | |
| analytics_seed_ <XXX> .dat | Set of Siebel seed data files containing translations for all the Siebel Analytics metadata objects. Each file contains all the translations for a single language. These files place translation-related seed data into the S_MSG table in the Siebel OLTP database. |

Process of Maintaining Translation Tables for Siebel Analytics

The Siebel Analytics Presentation layer supports multiple translations for any column name. When working with Siebel Answers or rendering a dashboard, English-speaking and French-speaking users see their local language strings in their reports. There are two kinds of application strings requiring translation in Siebel Analytics:

- Metadata

Metadata strings are Analytics-created objects in the Siebel Analytics repository such as Subject Area, Metrics, and Dimensions.

- Web Catalog

Web Catalog objects are end-user created objects such as Reports, Dashboards, and Pages. Translations for Web catalog strings are stored in the SiebelAnalytics.webcat file. For more information on accessing these strings and changing the translations, see *Siebel Analytics Web Administration Guide*.

This section describes the following tasks:

- [“Externalizing Metadata Strings” on page 155](#)
- [“Using the Externalize Strings Utility for Localization” on page 156](#)
- [“Adding Custom Translations to S_MSG Table” on page 157](#)
- [“Editing Custom Labels” on page 160](#)

Externalizing Metadata Strings

Metadata Strings are loaded by the Siebel Analytics Server from a database table. In the case of Siebel Analytics applications, this table is S_MSG in the Siebel transactional database. The initialization block Externalize Metadata Strings loads the strings for the Server. It is recommended that you run a test to make sure that this initialization block runs successfully. An example of the translation table is:

| MSG_NUM | MSG_TEXT | LANG_ID |
|--------------------------|-----------------------|---------|
| CN_Customer_Satisfaction | Customer Satisfaction | ENU |
| CN_Customer_Satisfaction | Kundenzufriedenheit | DEU |
| CN_Customer_Satisfaction | Satisfação do cliente | PTB |

By default, the Siebel Analytics repository is configured to run in English only. To deploy in any other language, you must externalize the metadata strings.

To externalize metadata strings in the Siebel Analytics repository

- 1 Stop the Siebel Analytics Server.
- 2 Open SiebelAnalytics.rpd using the Siebel Analytics Server Administration Tool in offline mode.

- 3** Select the entire Presentation layer and right-click the mouse to display the menu.
- 4** From the pop-up menu, select Externalize Display Names.

A check box appears next to this option the next time you right-click on the Presentation layer. When Externalize Display Names is checked, all metadata strings are read from an external Siebel OLTP database, specifically from the S_MSG table.
- 5** Make sure that the connection pool Externalized Metadata Strings points to the Siebel operational application database and is working correctly.
- 6** Restart the Siebel Analytics Server.

Using the Externalize Strings Utility for Localization

The Externalize Strings utility is primarily for use by translators or by the Siebel Analytics repository administrator. If you use a language other than English (US), you must use Externalize Strings to see the names of catalogs, tables and columns, and their descriptions if present, in their own language.

NOTE: Before using the Externalize Strings utility, translators should consult Siebel Systems.

To perform the string translation process using Externalize Strings

- 1** In the Presentation layer, right-click on a Catalog Folder.
- 2** Select the options Externalize Display Names and Externalize Descriptions.
- 3** From the Toolbar, choose Tools > Utilities > Externalize Strings and click the Execute button.
- 4** Click on the Catalog Folders in the left pane.

In the right pane, the translated values and the original strings (names) appear. These translated values are placed in session variables for use by Siebel Analytics Web.
- 5** Click the Save button to save the strings in the format you want.

- 6 Click the Close button to end the utility.

Adding Custom Translations to S_MSG Table

When you add custom objects to the metadata and choose to externalize these objects (by right-clicking on the object and checking the Externalize Display Name option), the Siebel Analytics Server looks for the translations (including those for the native language) in the S_MSG table.

If you do not externalize the display names, you do not need to perform the following procedures.

NOTE: However, the custom Presentation layer objects show up only in the native language of the metadata (the language in which you added these new objects).

- [“Adding Lists of Values for Siebel Analytics”](#)
- [“Adding String Translations For Siebel Analytics Metadata” on page 159](#)

Adding Lists of Values for Siebel Analytics

The S_MSG table can be populated using Siebel Tools. Before populating the S_MSG table, you must add a list of values (LOV) for Siebel Analytics (this is a one-time task).

To add LOV values for Siebel Analytics

- 1 Open Siebel Tools and connect to your database.
- 2 Navigate to the Screens Menu > System Administration > List of Values.
- 3 Right-click and select New Record from the pop-up menu.

- 4 Add a record with the following values.

| Value Name | Value Entry |
|----------------------------|-----------------------------------|
| Type: | MESSAGE_LEVEL |
| Display Value: | AnalyticsNew |
| Language-independent Code: | AnalyticsNew |
| Active: | check mark |
| Language Name: | [Choose your deployment language] |
| Description: | Analytics Metadata Strings |

All other fields should be default.

- 5 Add one more record, depending on your deployment, with the following values.

- Financial Services applications only

| Value Name | Value Entry |
|----------------------------|---|
| Type: | MESSAGE_LEVEL |
| Display Value: | FINS_Metadata |
| Language-independent Code: | FINS_Metadata |
| Active: | check mark |
| Language Name: | [Choose your deployment language] |
| Description: | Analytics Financial Services Metadata Strings |

- All other applications

| Value Name | Value Entry |
|-------------------|--------------------|
| Type: | MESSAGE_LEVEL |
| Display Value: | Metadata |

| Value Name | Value Entry |
|----------------------------|-----------------------------------|
| Language-independent Code: | Metadata |
| Active: | check mark |
| Language Name: | [Choose your deployment language] |
| Description: | Analytics Metadata Strings |

Adding String Translations For Siebel Analytics Metadata

The following procedure adds string translations for Siebel Analytics metadata to the S_MSG table.

To add string translations for Siebel Analytics metadata

- 1 Navigate to Screens Menu > System Administration > Strings.
- 2 Right-click and select New Record from the menu to add a new record.
- 3 Obtain the Message Key from the Siebel Analytics Administration Tool.

To get the message key, right-click on the new Presentation layer metadata object and select Properties from the menu. The Message key is displayed in the dialog box under Custom Display Name. The Message key is the part that starts with CN_.

For example, double-click on the Pipeline catalog folder in the Presentation layer. The Custom Display name is Valueof(NQ_SESSION.CN_Pipeline). CN_Pipeline is the Message Key.

- 4 Select your deployment language.
- 5 Choose the Message type—Metadata or FINS_Metadata, depending on which one was added in [Step 5 of “To add LOV values for Siebel Analytics” on page 157](#).
- 6 Select AnalyticsNew Message Level.
- 7 In the Message Text column, add the translation of the object.
- 8 Translate & Active Flags should be on.

- 9 Error Message # is 0.
- 10 Set the Message Facility to SIA if you are using the Siebel Financial Services application. Otherwise, set it to HORZ.
- 11 Repeat Steps 2–10 for each new metadata object string.
- 12 Restart the Siebel Analytics Server.

About Web Catalog Strings

The translations for such Web Catalog objects as report and page names are embedded in the SiebelAnalytics.webcat file. In multiple language deployment mode, if you add any additional Web Catalog objects, such as reports and new dashboard pages, you also need to add the appropriate translations. Add these translations using the Catalog Manager tool. For more information on using this utility, see *Siebel Analytics Web Administration Guide*.

Editing Custom Labels

Certain reports in the Web Catalog have custom labels for global prompts on prebuilt Siebel Analytics application dashboards. These custom labels are untranslated at this point, and need to be translated appropriately. Edit the custom labels as described in the following procedure.

To edit the custom labels

- 1 Log in to the dashboard as a user with Administrative privileges (Full Control) on that dashboard.
- 2 In the section containing the prompt, click the Edit button.
- 3 Click on the properties icon (hand symbol) to open the Analytics Request Properties page.
- 4 Click on the Modify Request hyperlink to navigate to Siebel Answers.

- 5 In the prompt definition, edit the string under Label, delete the English (US) string, and add the appropriate translation.

NOTE: The prompt Edit can be accessed directly by browsing the Catalog through Siebel Answers.

Internationalization Considerations Regarding Siebel Analytics

Process of Maintaining Translation Tables for Siebel Analytics

In the preceding chapters, the tasks described were for all deployments of Siebel Analytics. This chapter and following chapters describe the additional configuration required for you to run a Siebel Analytics application with a Siebel eBusiness Application or Siebel Industry Application.

Process of Upgrading Siebel Analytics Seed Data

You may need to upgrade Siebel Data Warehouse or seed data, for the following situations:

- If you are upgrading from an earlier version of Siebel Data Warehouse, follow the tasks in [“Upgrading from Previous Versions of Siebel Data Warehouse” on page 164.](#)
- If you are upgrading seed data from an earlier version of Siebel Analytics, follow the tasks in [“Updating Previous Siebel Analytics Seed Data” on page 165.](#)
- If you are upgrading seed data in a language that is not the primary installation language, follow the tasks in [“Process of Upgrading Siebel Analytics Seed Data” on page 163.](#)
- If you are upgrading seed data for a Siebel Industry Application, follow the tasks in [“Importing Siebel Industry Applications Seed Data” on page 166.](#)

Upgrading from Previous Versions of Siebel Data Warehouse

Figure 2 shows the steps required to upgrade from previous versions, or to install for the first time. Table 10 on page 165 further describes the steps in Figure 2.

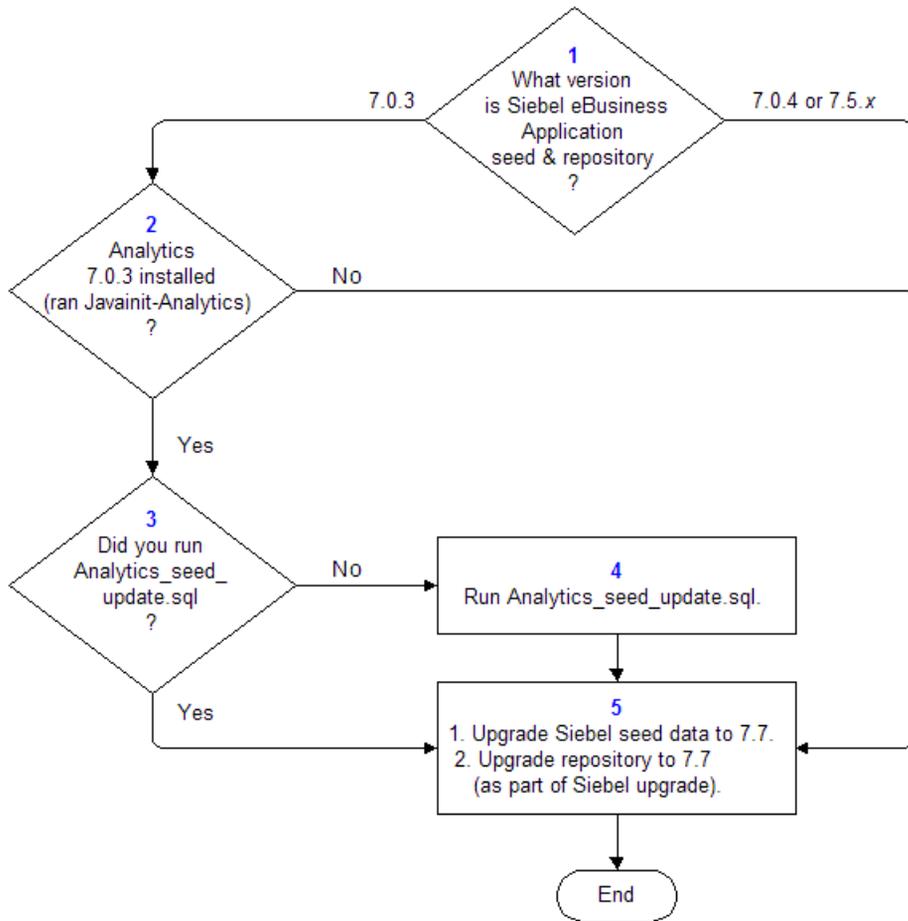


Figure 2. Upgrade Process For Siebel Analytics or New Siebel Analytics Installation

Table 10. Notes on Figure 1

| Step | Note |
|------|--|
| 1 | This refers to the version of the Siebel operational application seed data. Customers who installed version 7.0.3 of a Siebel eBusiness application, and who later upgraded to a 7.0.4 Siebel application, should determine if the Siebel seed and repository data were upgraded in this process. |
| 2 | <p>If you have run the JavaScript InitAnalytics, or have manually added certain Analytics-related records, such as Symbolic URLs, directly into the application, check for the following changes to Analytics records:</p> <ol style="list-style-type: none"> 1 In the Siebel eBusiness application, navigate to the Integration Administration > Symbolic URL Administration view. 2 Query in the URL field for *NQHOST*. <p>If one or more records show up, then the answer to this question in this step is Yes.</p> |
| 3 | Run Analytics_seed_update.sql. |
| 4 | Perform this step using standard Siebel upgrade processes. The high-level steps shown here are for reference only. |

Updating Previous Siebel Analytics Seed Data

This process is required for customers of Siebel Analytics version 7.0.3 only, who are upgrading to version 7.7 through intermediate versions of the software.

The file Analytics_seed_update and supporting utilities are available on the main Siebel operational application installation CD-ROM.

NOTE: The seed data update should be done by your Siebel operational application administrators, who normally upgrade Siebel operational application seed data.

To update Siebel Analytics 7.0.3 seed data

- Open a command-line interface and enter the following command. Replace all variables (names that start with a \$) with your installation-specific information shown in [Table 11](#).

```
$SiebelRoot\bin\odbcsql /s "$ODBCDataSource" /u $TableOwner /  
p $TablePassword /separator / /a /c rem /l $SiebelRoot/log/  
seed_cleanup.log $DbSrvrRoot/$DatabasePlatform/  
analytics_seed_update.sql /v
```

NOTE: UNIX users should replace the backslashes (\) with forward slashes (/).

Table 11. Variables for Updating Seeds

| Variable | Description |
|--------------------|---|
| \$SiebelRoot | Siebel Server installation directory |
| \$ODBCDataSource | ODBC Data Source Name for the Siebel Transaction Database |
| \$TableOwner | Table owner's name |
| \$TablePassword | Table owner's password |
| \$DbSrvrRoot | Location of DbSrvr installation |
| \$DatabasePlatform | RDBMS you are using for Siebel operational applications |

Importing Siebel Industry Applications Seed Data

Siebel Analytics seed data does not install with Siebel Industry Applications. You must import the seed data into your database after the Siebel Analytics installation is completed.

To import Siebel Analytics seed data to a database

- 1 Obtain the required language .inp and .dat files from the Siebel Analytics `$INSTALLDIR\SeedData\ language folder l_xx`, where `xx` is the two-letter code for the language you want to import.
- 2 Copy the .dat and corresponding .inp file from the language folder to the Siebel Server installation `\bin` folder.
- 3 From the command prompt in `siebsrvr\bin`, run the following command:

```
dataimp /u USERNAME /p PASSWORD /c ODBCDataSource /d Tableowner /  
f seed_analytics.dat /i seed_analytics.inp /w y
```

Upgrading Older Repositories on UNIX

If you have an older version of the Siebel Analytics server running under UNIX, you must run the following upgrade steps, otherwise parts of the repository may be invalid when you upgrade to Siebel Analytics 7.7.

In the repository, the Date, Time and Timestamp data types are not portable across UNIX and Windows. You can see this in the SiebelAnalytics.rpd on HP-UX. When you navigate to Manage > Variables > LAST_REFRESH_DT in the Administration Tool running on Windows, the LAST_REFRESH_DT will appear to be garbage—for example, it has a negative number for the year.

If you are running under UNIX, there are some additional configuration steps to run. Unless these steps are run, you may have compatibility problems for repositories with Date, Time, and Timestamp columns. The general process is to convert your 7.0.4 repository or repositories to text format, then convert them back to repository format before you use the repository.

To upgrade a 7.0.4 repository

- 1** Using binary mode, FTP the repository to a Windows 2000 or Windows NT machine.
- 2** Convert the repository to text.

```
nqudmlgen -U administrator -P SADMIN -R SiebelAnalytics.rpd -  
O SiebelAnalytics.txt
```

- 3** Convert the text back to repository format.

```
nqudmlxec -U administrator -P SADMIN -I SiebelAnalytics.txt -  
O SiebelAnalytics.rpd
```

- 4** FTP the repository back to the UNIX machine.

Using an Older Repository While Upgrading the Siebel Analytics Platform

It is possible to upgrade the Siebel Analytics platform while keeping the Siebel operational application on an existing previous version, repository, and schema. When Siebel Analytics is integrated with the Siebel operational application, the Analytics repository version must correspond to the transactional database and data warehouse database versions, but the version of the software does not have to match. For example, in an integrated environment, to use the Siebel Analytics version 7.5 repository and Web catalog, the Siebel operational application repository must also be on version 7.5, but the Siebel Analytics software may be on version 7.7.

The process for doing this is described in Siebel FAQ 2032: Can the Siebel Analytics platform be upgraded without upgrading the Siebel application repository?

Accessing Optional Analytics Applications

Depending on the options you purchased with your Siebel eBusiness application, you must perform additional steps in order to access the corresponding Analytics options. [Table 12](#) shows the additional options for Siebel Analytics.

Table 12. Analytics Applications Options

| Siebel Application | Options |
|--------------------|---|
| Sales | Forecasting, Incentive Compensation |
| Service | Universal Queuing, Email Response, Agreements |
| Partner | Partner Marketing, Partner ERM, Partner ISS |

By default, the dashboards and reports contained in these optional areas are hidden. If, for example, you purchased Sales Incentive Compensation with your Siebel Sales application, you must perform the additional steps shown in [“To turn on Analytics options” on page 168](#) to access the Incentive Compensation Analytics.

To turn on Analytics options

- 1 Log in to Siebel Analytics as Administrator.

- 2** Navigate to Answers > Analytics Web Administration and go to Manage Web Groups & Users.
- 3** Locate the Web Group corresponding to your option. The Web Group options are:
 - No Forecasting
 - No Forecasting Lite
 - No Universal Queuing
 - No Email Response
 - No Service Agreements
 - No Partner Marketing
 - No Partner ERM
 - No Partner ISS
- 4** Click on the Edit icon.
- 5** Under the Group Membership section, click the delete icon (X) to delete Analytics Users from this group.
- 6** Click Finished and log out of the application.
- 7** Log in again to access the additional optional dashboards and reports.

Accessing Siebel Analytics Through Siebel Applications

8

This chapter is for Siebel Analytics administrators installing and configuring a Siebel operational application. Prior to performing these steps, you should read *Siebel Analytics Server Administration Guide* as well as this book.

Configuring Siebel Analytics applications consists of:

- [“Process of Configuring the Siebel Analytics Repository” on page 172](#)
- [“About Siebel Analytics Initialization Blocks” on page 177](#)
- [“Creating a Dedicated Siebel Analytics Repository” on page 180](#)
- [“Restarting the Siebel Analytics Server” on page 182](#)
- [“Completing the Initialization in the Siebel Operational Application” on page 182](#)
- [“Process of Configuring Analytics Action Links” on page 183](#)

Configuration Tasks for Siebel Analytics Applications

After installation, you must configure the Siebel Analytics repository and initialize the Siebel operational application in order to view the Analytics dashboards.

The process of configuring Siebel Analytics applications is as follows:

- Configure the Analytics repository.

Using the Server Administration Tool, configure the Siebel Analytics repository (SiebelAnalytics.rpd) in the Physical layer.

- Change the database connection type for the data sources relevant to your Analytics operational applications.

- Change the default data source names (DSN) and DSN user name to conform with your DSNs and DSN user name.
- Change the table owner to match the owner of your database environment for:
 - Siebel OLTP database
 - Siebel Data Warehouse
- Initialize the Analytics operational application.
- Change the operational application host name to the host name of the machine that runs Siebel Analytics Web.

Process of Configuring the Siebel Analytics Repository

This section describes the following tasks, performed using the Server Administration Tool. (For more information about the Server Administration Tool, see *Siebel Analytics Server Administration Guide*.)

- [“Stopping and Starting the Services When Importing a Repository”](#)
- [“About the Preconfigured Database Connections” on page 173](#)
- [“Changing the Default DSNs” on page 173](#)
- [“Changing the Database Type” on page 174](#)
- [“Changing the Connection Pools” on page 176](#)

Stopping and Starting the Services When Importing a Repository

Before copying or loading a new repository file to a server, you must stop the Siebel Analytics Server and World Wide Web Publishing services. The order in which the services are stopped, then restarted, is important. Use the following sequence.

To stop the services before importing or copying a repository

- 1** Stop the World Wide Web Publishing service.
- 2** Stop the Siebel Analytics Server service.

To start the services before importing or copying a repository

- 1 Start the Siebel Analytics Server service.
- 2 Start the World Wide Web Publishing service.

About the Preconfigured Database Connections

The SiebelAnalytics.rpd application repository contains preconfigured database connections. By default the database type is IBM DB2 UDB V7. You will have to reconfigure all the database connections appropriate to your environments. This includes changing the database types and updating the user names and passwords. A list of the connections is presented in [Table 14 on page 176](#).

Changing the Default DSNs

The database DSNs and user names have been configured to use the specific static repository variables shown in [Table 13](#). The default values should be changed to conform with the database DSNs in your environments.

Table 13. Static Repository Variables and Their Values

| Variable | Value |
|-----------|-------------|
| OLAP_DSN | SIEBEL_OLAP |
| OLTP_DSN | SIEBEL_OLTP |
| OLAP_USER | SIEBEL |
| OLTP_USER | SIEBEL |
| TBO | SIEBEL |
| OLAPTBO | SIEBEL |

For more information on repository variables, see *Siebel Analytics Server Administration Guide*.

To update the default DSN values

- 1 In the Siebel Analytics Administration Tool, navigate to Manage Variables > Repository > Static list.
- 2 Double-click on each variable and update the value in the Default Initializer column.
- 3 Update two additional variables, TBO and OLAPTBO.

These variables are used for the Siebel eBusiness application database table owner name and the Siebel Data Warehouse table owner name. Update the table owners so that the various initialization blocks work properly.

Changing the Database Type

If you are using other database types, follow these steps to change the database type.

To change the database type

- 1 On a Windows computer, open the Siebel Analytics Administration Tool in offline mode.

NOTE: For information on how to use the Siebel Analytics Administration Tool, access the Administration Tool online help.

By default, the username for the repository is Administrator, and the password for the repository is SADMIN. However, your administrator may have changed the default password.

NOTE: Be sure to change the default password before migrating to production.

- 2 In the Physical layer, double-click on a database connection to open the Properties window.
- 3 Use the Data Source Definition drop-down list to choose the database type. After making the database type change, click OK.

- 4 Expand the database connection to view the connection pool. Double-click the Connection Pool and select the appropriate Call Interface.

The default recommended call interface will be automatically updated based on your connection type. Check the supported call interfaces before changing the default one.

The DSN name has been preconfigured to VALUEOF(OLAP_DSN) for the OLAP database and VALUEOF(OLTP_DSN) for the OLTP database. The user name has been preconfigured to be VALUEOF(OLAP_USER) and VALUEOF(OLTP_USER) as well. The default password is db2. You should update the password according to your environment.

For more information on how to manage database connections, read *Siebel Analytics Server Administration Guide*.

- 1 Repeat [Step 2 on page 174](#) through [Step 4](#) for each database connection appropriate for your Siebel Analytics applications.

NOTE: If you are running Oracle, make sure that all Initialization Block connection pools are configured to use the correct login, in order to prevent login failures (for example, Pharma Initialization Blocks do not fail for Siebel eBusiness Applications).

- 2 Save the repository.

NOTE: If you use AIX, HP-UX, or Solaris, copy the repository file to the AIX, HP-UX, or Solaris machine.

Changing the Connection Pools

Siebel Analytics uses multiple connection pools. In [“To change the database type” on page 174](#), you configured these connection pools for your operational database. [Table 14](#) explains the purpose of some connection pools.

NOTE: The default password for all the database connections is db2. Update the passwords for your database connections.

Table 14. Connection Pools

| Connection Name | Description |
|------------------------------------|---|
| BBB Data Warehouse | Enterprise visibility Siebel Data Warehouse (Siebel eBusiness Applications Analytics customers only). |
| BBB OLTP | Enterprise visibility Siebel transactional database (Siebel eBusiness Applications Analytics customers only). |
| ERM Siebel OLTP | Workforce Analytics connection to Siebel transactional database (Workforce Analytics customers only). |
| Externalized Metadata Strings | Connection to the Siebel eBusiness application database to load the translations of Metadata Strings (Financial Services and all customers deploying Analytics in non English language). This is configured to be the same as the Siebel transactional database. |
| Forecasting Siebel Data Warehouse | Connection to the Siebel Data Warehouse for Forecasting Analytics customers only. |
| Forecasting Siebel OLTP | Connection to the Siebel transactional database for real-time forecasting Analytics customers only. |
| Incentive Compensation Siebel OLTP | Database connection to the Siebel transactional database for Incentive Compensation Analytics customers only. |
| Pharma Data Warehouse | Connection to the Pharmaceutical data warehouse for pharmaceutical industry-specific Analytics. |
| Real-time OLTP | Connection to the Siebel transactional database for real-time Analytics (all customers.) |

Table 14. Connection Pools

| Connection Name | Description |
|------------------------|---|
| SIA Data Warehouse | Connection for Siebel Industry Applications data warehouse, covering the following Siebel Industry Applications: Financial Services, Automotive, Consumer Sector and Communications. |
| Siebel Analytics Usage | Connect to the database where you store the usage statistics of the Siebel Analytics Server. Using this requires Siebel Analytics Scheduler to load the usage statistics into the database (optional for all customers). |
| Siebel Data Warehouse | Database connection to the Siebel Data Warehouse (all customers). |
| Siebel OLTP | Connection to the Siebel transactional database for Authentication and Authorization (all customers). There are two connection pools to the Siebel transactional database. Both should be configured properly. The OLTP DbAuth Connection Pool is used for database authentication of users. The user name and password is preconfigured to :USER and :PASSWORD and should be left as such if you want to use database logins to authenticate users. |
| UQ Siebel OLTP | Connection to the Siebel transactional database for Universal Queuing customers only. |

About Siebel Analytics Initialization Blocks

The SiebelAnalytics.rpd file uses initialization blocks that set dynamic session and repository variables within the Siebel Analytics Server. For more information about initialization blocks and variables, read *Siebel Analytics Server Administration Guide*.

In general, initialization blocks do not have to be reconfigured if you are using one of the supported database platforms. For more information on how to add custom SQL for each database in the Initialization blocks and Select tables, read the database packaging support in *Siebel Analytics Server Administration Guide*.

The SQL for the applications repository initialization blocks and all select tables have been set for the Siebel Analytics-supported database versions of:

- IBM DB2

- Oracle
- Microsoft SQL Server

You may have to change some of the initialization blocks if you do not use one of these supported databases.

[Table 15](#) lists some of the initialization blocks common to all Siebel Analytics applications and their purposes. Initialization blocks that are specific to each Siebel Analytics applications area are not listed here. For example, the `LAST_SYND_DATES` block sets certain dates for Pharmaceutical Analytics and can be ignored by other applications that do not use syndicated data.

Table 15. Initialization Blocks and Their Purposes

| Initialization Block | Purpose |
|-----------------------------|---|
| Authorization | Calculates user's responsibilities from the Siebel database. |
| Authentication | Authenticates against the Siebel database and verifies the user exists as a Siebel eBusiness application user. |
| External Metadata Strings | Gets the translated value of metadata strings for the user's locale. This initialization block is critical to Analytics Dashboards in international deployment. |
| LOCALE | Sets the user's locale specification in the Siebel Analytics Server. |
| Login Properties | Gets user's login properties, such as full name, from the Siebel database. This initialization block also sets the logging level of the users. By default, the Analytics log level has been set to 0 for all users. If you wish to generate Analytics query logs for all users, this initialization block should be updated by changing the default value as well as the value in the initialization SQL. |
| Default System Language ID | Sets the variable <code>OLTP_LANG_ID</code> by querying the Siebel eBusiness application database. |
| Orgs for Org-based Security | Queries the Siebel eBusiness application database to get the organization membership for each user. It sets the variable <code>ORGANIZATION</code> . |
| Primary Owner ID | Sets the primary owner ID based on the user login ID. |
| Primary Position ID | Queries the Siebel eBusiness application database to set the variable <code>PRIMARY_POSTN_ID</code> . |
| Warehouse Refresh Date | Sets several time-based variables such as <code>CURRENT_YEAR</code> . |

Table 15. Initialization Blocks and Their Purposes

| Initialization Block | Purpose |
|----------------------|---------------------------------|
| ETL Run Date | Retrieves the ETL run date. |
| ETL Default Currency | Retrieves the default currency. |

You can view a list of initialization blocks and their strings. In Siebel Analytics Server Administration Tool, navigate to Manage > Variables > Initialization Blocks. Right-click any initialization block and select Properties to view information about that block. For more information, see *Siebel Analytics Server Administration Guide*.

About Merged Siebel Analytics Repositories

Organizations with Siebel Analytics applications that have customized content in the Siebel Analytics repository (SiebelAnalytics.rpd) or in the Siebel Analytics Web Catalog (SiebelAnalytics.webcat), need to merge their customized content into the repository and Web Catalog that are distributed with this version. For information about merging content into the Siebel Analytics repository, see the section on the Merge utility in *Siebel Analytics Server Administration Guide*. For information about merging content into the Siebel Analytics Web Catalog, see the section on Analytics Catalog Manager in *Siebel Analytics Web Administration Guide*.

NOTE: Make all changes to the repository in Offline mode.

Creating a Dedicated Siebel Analytics Repository

Depending on the Siebel Analytics applications that you have purchased, the repository shipped with this release (SiebelAnalytics.rpd) may contain a large number of Presentation layer subject areas. You are licensed to use only a subset of these subject areas, and the remaining material is unnecessary to your needs. The Siebel Analytics Server Administration Tool feature, Import from repository, is a way for you to reduce the size of the .rpd file. Anything not required by the subject areas you license is absent from the new, smaller repository you create. For example, if you purchased and intend to use Siebel Automotive Analytics, all the Siebel Pharma Analytics-related subject area material should be removed from your repository. This will make your repository administration easier and also improve the server startup time. The relevant Analytics subject areas for Siebel eBusiness Applications and Siebel Industry Applications are listed in [Appendix C, “Customizing a Siebel Analytics Application.”](#)

Trimming the repository improves performance.

To import subject areas into a new, dedicated repository

- 1** Create a new, empty repository.
- 2** Choose Import from repository and point to the repository SiebelAnalytics.rpd.
- 3** From the Presentation layer, choose the subject areas that you licensed.
- 4** At the Objects to Update screen, choose the objects to be updated.

The drop-down list at the top of the window shows you the categories of objects that you can update—Catalogs, Users, Groups and Variables. The left pane shows you the objects in the category you selected. To refresh the display, click the Refresh button.

- 5** In the left pane, select the objects within that category that you want to update.

You can select multiple objects by SHIFT-clicking to select adjacent objects, or CONTROL-clicking to select non-adjacent objects.

Depending on the category of object you selected, different buttons allow you to specify how you want objects added:

- When you choose the Catalogs category, the presentation catalogs are displayed in the left pane and the Add with Children button becomes active.
 - Click the Add with Children button to add the presentation catalogs to the right pane. Presentation catalogs are always added with all their child objects, and all associated objects, from the Presentation Layer to the Physical Layer, will be updated or synchronized.
 - When you choose the Groups category, you can:
 - Click the Add button to update or synchronize only the group.
 - Click the Add with Children button to update or synchronize the group and all the groups that are below it in the group hierarchy.
 - Click the Add with Parents button to update or synchronize the group and all groups that are above it in the group hierarchy. (You can view group hierarchies from the Security Manager.)
 - When you choose the Variables category, the defined system and session variables are displayed in the left pane. You can:
 - Click the Add button to update or synchronize only the variable.
 - Click the Add with Parents button to update or synchronize the variables and any parent variables on which they depend.
- 6** After you have selected the objects, click the appropriate button to add the object to the right pane.
- Objects in the right pane are the objects that will be imported. You can remove an object from the right pane by clicking on it and then clicking the Remove button. You can select multiple objects to remove by SHIFT-clicking or CONTROL-clicking on them as appropriate.
- 7** When you are finished, click Next to continue.

Restarting the Siebel Analytics Server

For the changes to take effect, you must save the repository and restart the server.

To restart the server on Windows

- 1 Restart the Siebel Analytics Server, which appears under Services.

NOTE: The Siebel Analytics Server takes about 10 minutes to start. In the Microsoft Windows environment, the Services Manager returns a false error indicating that it was unable to start the server. This is a known Microsoft Services Manager issue, which times out after five minutes. The Siebel Analytics Server is still starting, as is shown when the Services window is refreshed. If the Siebel Analytics Server fails to start, it will log an error in nqServer.log file in the Log directory.

- 2 Restart the World Wide Web Publishing service.
- 3 In the ODBC Driver Manager, test that the DSN called Analytics_web (of type Siebel Analytics Server) connects to the Siebel Analytics Server. Use the username Administrator and the password SADMIN.

NOTE: Be sure to change the default password before migrating to production.

- 4 Restart the Siebel Analytics Web service. This may take several minutes.

To restart the server on UNIX

- Stop the server, then start it again, using the commands listed in [Step 2 of “To install the Siebel Analytics software on UNIX” on page 64.](#)

Completing the Initialization in the Siebel Operational Application

Once you have configured your Siebel Analytics Server and are able to access the dashboards, you will need to update the Siebel operational application to view Analytics dashboards from within the Siebel operational application.

To update the Siebel operational application

- 1** Open your Siebel operational application and log in as SADMIN.
- 2** Navigate to View > Site Map.
- 3** Click Integration Administration screen.
- 4** Click Host Administration view.
- 5** Query for NQHOST in the Virtual Name column.
 - In Windows, change the host name from *< AnalyticsServerName >* to the host name of the machine that runs Siebel Analytics Web.
 - In AIX or Solaris, change the host name from *< AnalyticsServerName >* to the name of the :port.

You may need to add the domain name suffix to the server name in order to make sure that Action Links on the Siebel Analytics user interface work. This is only applicable for UNIX.

For example, `servername.siebel.com:8080`

- 6** Log out of the application and log back in.

Process of Configuring Analytics Action Links

Siebel Analytics supports Action Links from a Siebel Analytics report to the relevant record in the Siebel operational application.

NOTE: For this feature to work, the Web Server component of Siebel Analytics should be running on the same physical machine as the Siebel Web Server Extension (SWSE).

- If you plan to run the Siebel Web Engine (SWE) and Analytics Web on different Web servers, with the Web servers running on different machines, you must use Resonate Dispatch Manager (a load balancing server) to create a single logical domain with the two machines, and assign SWE and Analytics Web to different ports. This section describes the steps necessary to do this.

- “Installing Resonate for Siebel Analytics Web Server.”
- “Creating Scheduling Rules for the Siebel Analytics Web Server” on page 185
- “Installing Siebel Servers and Siebel Web Engine” on page 186
- “Installing Resonate for the Siebel Web Engine” on page 186
- “Creating Scheduling Rules for Siebel Web Engine” on page 186
- “Integrating a Siebel Application with Siebel Analytics Server” on page 187
- “Testing the Action Links” on page 188

Installing Resonate for Siebel Analytics Web Server

These procedures describe how to set up the Siebel Web Engine (SWE) and Analytics Web on different Web servers running on different machines, to create a single logical domain between the two machines using Resonate Dispatch Manager. This setup is necessary in order for Action Links to work properly.

You may use other load balancing software. However, Siebel Systems provides the Resonate server and provides technical support only for this load balancing software. For other types of load balancing systems, please refer to the documentation of the software. The key element is to create a virtual IP address for the Siebel Web Engine and Siebel Analytics Server so that, to the browser, it appears that both servers are running on the same IP address. Creating virtual IP addresses is described in several of the following procedures.

NOTE: Siebel Analytics must already be installed and tested before installing the Resonate software.

To install Resonate Dispatch Manager for Siebel Analytics Web Server

- 1** Install Resonate Dispatch Manager on the same machine as the Analytics Web Server.

Change the machine IP address to a static IP address.

- 2** Connect to Resonate Dispatch Manager.

- 3 Click on Site Setup.
- 4 In the Policies tab, make sure the Scheduling Policy is set to Resource-based.

Creating Scheduling Rules for the Siebel Analytics Web Server

Use the following procedure to create scheduling rules for the Siebel Analytics Web Server.

To create scheduling rules for the Siebel Analytics Web Server

- 1 Click on Scheduling Rules.
- 2 In the HTTP tab, do the following:
 - a In the VIP window, highlight the value.

NOTE: VIP is the Resonate term for Virtual IP address.

 - b In the Virtual Port field, enter any port number except 80.
 - c In the Server Ports field, insert 80.
 - d In the Servers window, highlight the appropriate DSN for Analytics Web Server.
 - e In the Resource field, select URL.
 - f In Path Expression field, enter the string `/Analytics/*` (include the slashes and asterisk).

Click Add. If necessary, click Apply Changes.

- 3 Test the configuration.
 - a Launch a browser and type the Siebel Analytics URL, including the forward slash at the end.
 - b You should be able to log in and see your Siebel Analytics dashboards to check that PopChart is working.

Installing Siebel Servers and Siebel Web Engine

This procedure installs the Siebel Server and Siebel Web Engine.

To install Siebel Servers and Siebel Web Engine

- 1 Using the Siebel Software Configuration Utility, configure Siebel Servers. In the Use Resonate Central Dispatch check box, do *not* check Yes. Click Next.
- 2 Install the Siebel Web Engine (SWE). In the Use Resonate Central Dispatch check box, do *not* check Yes. Click Next.
- 3 Launch a Siebel application to test if the Siebel Servers and SWE are working properly.

Installing Resonate for the Siebel Web Engine

After the Siebel Servers and SWE are installed, you install the load balancing software.

To install Resonate Dispatch Manager for the SWE

- 1 Install the Resonate software on the same machine as the SWE.

NOTE: Before or after installing Resonate, change the machine IP address to a static IP address.

- 2 Connect to Resonate Dispatch Manager.
- 3 Click on Site Setup.
- 4 Make sure the Scheduling Policy is set to Resource-based.

Creating Scheduling Rules for Siebel Web Engine

Use the following procedure to create scheduling rules for the Siebel Web Engine.

To create scheduling rules for SWE

- 1 Click on Scheduling Rules.
- 2 In the HTTP tab, do the following:

- a** In the VIP window, highlight the value.
- b** In the Virtual Port field, enter any port number except 80.
- c** In the Server Ports field, insert 80.
- d** In the Servers window, highlight the appropriate Server for Siebel Web Engine.
- e** In the Resource field, select URL.
- f** In Path Expression field, enter the string `/callcenter/*` (include the slashes and asterisk).

Click Add. If necessary, click Apply Changes.

- 3** Test the scheduling rules.
 - a** Launch a browser and type the Siebel Analytics URL, including the forward slash at the end.
 - b** You should be able to log in to Siebel Analytics Web.

Integrating a Siebel Application with Siebel Analytics Server

This procedure shows how to configure a Siebel operational application to run with Siebel Analytics.

To integrate a Siebel Application with Siebel Analytics Server

- 1** Go to Integration Administration > Host Administration.
- 2** In the HTTP Host tab, Name field, set the NQHost parameter to point to VIP:90.
- 3** Step off the record to confirm it.
- 4** Log off and log back in.

Testing the Action Links

After you have created Action Links, test them using the following procedure.

To test the two types of Action Link

- 1** Log in using your system login. Go to Service Analytics screen > Employee Analytics > To Do List.
- 2** Click the Action Link on the pie chart in Overdue Activities.
You should be in Overdue Activities Detail in Analytics.
- 3** Now click any ROW_ID Action Link.
You should be in the Employee screen in Siebel Call Center.

Integrated Security in Siebel Operational Applications and Siebel Analytics

9

This chapter covers the data- and object-level security groups for areas within the Siebel eBusiness Applications and Siebel Industry Applications. For more on user authentication in Siebel Analytics, see [Chapter 5, “Siebel Analytics User Authentication and Security Setup.”](#)

The topics covered in this chapter include:

- [“About Levels of Security in Siebel Analytics”](#)
- [“Integrated Security for Responsibilities and Groups in Siebel Analytics Applications”](#)
- [“Siebel eBusiness Applications Security”](#) on page 205
- [“Siebel Industry Applications Security”](#) on page 218

NOTE: For the purpose of this chapter, Responsibility is interchangeable with Repository group and Web Catalog group; they have a one-to-one correspondence.

About Levels of Security in Siebel Analytics

This section discusses security levels and authentication as they are used by Siebel Analytics. Two different levels of security configuration are supported:

- [“Object-Level Security in Siebel Analytics”](#) on page 190
- [“Data-Level Security in Siebel Analytics”](#) on page 190

Object-Level Security in Siebel Analytics

Object-level security controls access to various Analytics objects, primarily metadata and Web Catalog objects.

- Metadata objects (repository) security:

Controls access to metadata objects such as subject areas, tables and columns. See [“Metadata Object Level Security \(Repository Groups\) in Siebel Analytics” on page 196.](#)

- Web Catalog objects (Web client) security:

Controls access to dashboards, pages, folders and reports. See [“Metadata Object Level Security \(Web Catalog Groups\) in Siebel Analytics” on page 197.](#)

Data-Level Security in Siebel Analytics

Data-level security controls the content that appears in the end-user objects, such as dashboard reports and figures. When two different users run the same report, they see different data, depending on their access.

There are three types of data-level security:

- Primary position based

Equivalent to the Siebel operational application My Teams view. This type of security implies that the user sees all data where the user's position is the primary position on that record, or when the user is the manager of a position who is primary on the record.

- Primary organization based

The Siebel operational application view equivalent is My Organization's Records. In this case the user sees all data where the user's organization owns the record or an organization that reports to the user's organization owns the record.

- Primary owner based

This gives a subset of the Siebel operational application view equivalent of My Records. In this case the user sees data where the user is the primary owner of the record (for example, Activities). The Siebel operational application equivalent view also includes records where the user is on the team for that record.

Integrated Security for Responsibilities and Groups in Siebel Analytics Applications

Siebel Analytics applications security is based on Responsibilities and Siebel Analytics repository groups.

A Repository group and a Web Catalog group are created for each Siebel Analytics-specific responsibility defined in the Siebel operational application. The group names are exactly the same as the responsibility name. Using the Siebel operational application, you assign users to the appropriate Analytics responsibilities, and the membership will automatically be reflected in the repository as well as the Web Catalog. The user inherits the appropriate permissions from the responsibilities.

This topic is described in the following subtopics:

- [“Responsibilities and Access in Siebel Analytics Applications” on page 192](#)
- [“Metadata Object Level Security \(Repository Groups\) in Siebel Analytics” on page 196](#)
- [“Metadata Object Level Security \(Web Catalog Groups\) in Siebel Analytics” on page 197](#)
- [“Web Catalog Security in Siebel Analytics Applications” on page 198](#)
- [“Data-Level Security in Siebel Analytics Applications” on page 199](#)
- [“Implementing Data-Level Security in the Siebel Analytics Repository” on page 201](#)
- [“Position and Organization Initialization Variables in Siebel Analytics Applications” on page 204](#)

- [“Default Security Settings in Siebel Analytics Applications” on page 205](#)

Responsibilities and Access in Siebel Analytics Applications

Permission and access are always determined by user’s memberships in various responsibilities.

NOTE: Users are always created in the Siebel operational application database, never in the Siebel Analytics repository.

In this case, Responsibility is interchangeable with Repository group and Web Catalog group; they have a one-to-one correspondence.

There are two ways for a Siebel administrator to check a user's responsibility:

- In the Siebel operational application, go to the Responsibilities view.
- Go to the Analytics Web and click the My Account link.

The group membership for the user is shown near the bottom of the Web page.

When you add a new responsibility to a user in Analytics Web, the change is not immediately reflected in the Analytics environment. In order to register the new user responsibility, two things must happen:

- The administrator must reload the Server metadata through Analytics Web.
- Once the metadata is reloaded, the user must log out from the Siebel operational application, then log in again.

Siebel Analytics applications ship with certain preconfigured responsibilities. [Table 16](#) shows these preconfigured responsibilities. Some of the responsibilities are described in further detail in [Chapter 10, “Siebel Analytical Applications Metadata,”](#) and in [Chapter 11, “Siebel Industry Applications Analytics Metadata.”](#)

Table 16. Siebel Analytics Applications Preconfigured Responsibilities

| Application | Responsibility |
|---------------------|--|
| Sales | Sales Analytics Administrator |
| | VP of Sales Analytics |
| | Sales Manager Analytics |
| | Sales Representative Analytics |
| Marketing | Marketing Analytics User |
| | Marketing Analytics Administrator |
| Interactive Selling | ISS Analytics User |
| | ISS Analytics Administrator |
| Service | Service Analytics VP |
| | Service Analytics Manager |
| | Service Analytics Administrator |
| | Service Analytics Service User |
| | Service Analytics Call Center User |
| | Service Analytics eMail User |
| Partner | Partner Service Rep Analytics User |
| | Partner Sales Rep Analytics User |
| | Partner Executive Analytics User |
| | Partner Operations Analytics User |
| | Partner Sales Manager Analytics User |
| | Partner Service Manager Analytics User |

Table 16. Siebel Analytics Applications Preconfigured Responsibilities

| Application | Responsibility |
|----------------------------------|--|
| | Channel Accounts Manager Analytics User |
| | Channel Executive Analytics User |
| | Channel Operations Analytics User |
| | Channel Marketing Manager Analytics User |
| Employee Relationship Management | ERM Analytics VP |
| | ERM Analytics Manager |
| | ERM Analytics HelpDesk Agent |
| | ERM Analytics HelpDesk |
| | ERM Analytics User |
| | ERM Analytics HR |
| | Executive Analytics User |
| | Executive Analytics Administrator |
| Communications, Media, & Energy | CM Marketing Analytics User |
| | CM Marketing Analytics Administrator |
| | CM Sales Analytics User |
| | CM Sales Analytics Administrator |
| | CM Service Analytics User |
| | CM Service Analytics Administrator |
| Financial Services | Finance Analytics User |
| | Insurance Analytics User |
| | Financial Services Analytics User |

Table 16. Siebel Analytics Applications Preconfigured Responsibilities

| Application | Responsibility |
|------------------------------|--------------------------------------|
| Consumer Goods | CS Analytics VP Sales |
| | CS Analytics Key Account Manager |
| | CG Sales Analytics User |
| | CG Sales Analytics Administrator |
| Life Sciences | LS Administrator |
| | PH US Sales Analytics User |
| | PH EMEA Sales Analytics User |
| | PH Sales Analytics Administrator |
| | PH US Marketing Analytics User |
| | PH EMEA Marketing Analytics User |
| | PH Marketing Analytics Administrator |
| | PH Mobile Analytics User |
| | PH Mobile Analytics Admin |
| | PH Medical Education Analytics User |
| | PH Medical Education Analytics Admin |
| | PH US Call Activity Analytics User |
| | PH EMEA Call Activity Analytics User |
| | PH Call Activity Analytics Admin |
| | PH US Executive Analytics User |
| | PH EMEA Executive Analytics User |
| PH Executive Analytics Admin | |

Table 16. Siebel Analytics Applications Preconfigured Responsibilities

| Application | Responsibility |
|-------------|------------------------------------|
| Automotive | AT Service Analytics User |
| | AT Service Analytics Administrator |
| | AT Sales Analytics User |
| | AT Sales Analytics Administrator |
| | AT Partner Analytics User |
| | AT Partner Analytics Administrator |

Metadata Object Level Security (Repository Groups) in Siebel Analytics

Metadata object security is configured in the Analytics repository (SiebelAnalytics.rpd) using the Analytics Administration Tool. “Everyone” is denied access to each of the subject areas. Each subject area is configured to give explicit read access to selected related responsibilities. This access can be extended to table and column level.

NOTE: In the shipped product, only permissions at the subject area level have been configured.

The exceptions to the explicit configuration rule are the Communications and Financial Analytics industry applications, where there are tables and columns specific to these two industries scattered throughout the general Siebel operational application subject areas. These industry-specific metadata objects are hidden from other groups.

Siebel Analytics supports hierarchies within the groups in the repository. In the Analytics repository there are certain groups that are parent groups, which define the behavior of all the child groups. Inheritance is used to let permissions ripple through to child groups. The parent groups and their purpose are shown in [Table 17](#).

Table 17. Repository Parent Groups

| Parent Group | Permissions Inherited by: |
|---------------------|---|
| Finance | All Financial applications groups |
| Insurance | All Insurance applications groups |
| CM General | All Communications applications |
| Consumer Sector | Consumer Sector groups |
| Pharma | Life Sciences/Pharmaceuticals applications groups |
| Channel Managers | All eChannel applications groups |
| Partner Managers | All Partner application groups |

Metadata Object Level Security (Web Catalog Groups) in Siebel Analytics

Web Catalog objects, such as dashboards and pages, are controlled using Web Catalog groups, which have the same name as the Siebel responsibilities. The access to dashboards and pages are controlled using the Web Catalog groups. If you log in as a user who belongs to the Web Catalog group Field Sales Representative Analytics, then you see only the Overview, Forecasting, and Details pages within the Pipeline Dashboard. In a similar fashion, you see only dashboards that allow you access to at least one page within that dashboard. For more information on Web Catalog security, see *Siebel Analytics Web Administration Guide*.

Web Catalog Security in Siebel Analytics Applications

Security on the Web Catalog has been preconfigured for the groups listed in [Table 17 on page 197](#) for each application. To customize these groups, use the Analytics Web interface.

NOTE: The group security applied is carefully controlled at the folder and subfolder level. It is recommended that only Siebel administrators configure the security settings.

Match permissions to dashboards in Analytics Web Catalog, with the permissions related to Siebel operational application views. In the integration environment, each Siebel Analytics-related Siebel operational application view maps to a given Siebel Analytics dashboard. In the Siebel operational application, views are controlled through responsibilities. However, in Siebel Analytics Web Catalog, access to dashboards for each group is controlled through Web Administration.

The two access setups must match. If users have access to a view in the Siebel operational application, but do not have access to the corresponding dashboard, then they will get an error message indicating that they do not have access to the dashboard. On the other hand, if users do not have access to a view that maps to a dashboard that the users do have access to, then the users will not be able to get to that dashboard through the Siebel operational application user interface.

Because responsibilities control access to Siebel views, they also control access to the Siebel Analytics dashboards of Siebel Analytics applications. However, for security reasons, Analytics dashboards themselves are specifically configured, regardless of the Siebel operational application view access. The view security for a responsibility should match that on the dashboard. If you get an Access Denied error when accessing Siebel Analytics through the Siebel operational application view, then you do not have access to an Analytics dashboard that should be accessible, or you have access to a Siebel view that should not be accessible. If you try to access a dashboard containing reports based on a subject area to which you do not have access, you would see a dashboard with no reports.

Data-Level Security in Siebel Analytics Applications

NOTE: Data-level security in Siebel Analytics applications is based on the position- and organization-based security model of the Siebel operational applications. For more information, see *Security Guide for Siebel eBusiness Applications*.

Data-level security defines what the application user sees inside a report. The same report, when run by two different users, can bring up different data. This is similar to how the My Opportunities view in a Siebel operational application displays different data for different users. However, the structure of the report is the same for all users, with one exception. The exception is when a user does not have access to a column within a report. This is a rare case; Siebel Analytics handles this situation by returning the report without the column in question.

Data-level security is configured exclusively through the Analytics repository using Repository groups (the equivalent of Siebel responsibilities). It is configured at the logical layer, mostly on dimensions. The Fact tables, other than the most sensitive Revenue facts (Closed Revenue, Opty Revenue and Expected Revenue), are not secured directly. However, dimensions are secured, as shown in [Table 18](#).

Table 18. Security Configuration by Dimension

| Dimensions Secured | Primary Owner | Primary Position | Org Based |
|---|----------------------|-------------------------|------------------|
| Accounts | | X | X |
| Activities | X | | |
| Assets | X | X | X |
| Campaigns | | | X |
| Claims (Financial Services & Life Sciences) | | X | |
| Contacts | | X | X |
| Employee (OLTP) | | X | |
| Revenue Fact | | X | |
| —Closed Revenue | | X | X |

Table 18. Security Configuration by Dimension

| Dimensions Secured | Primary Owner | Primary Position | Org Based |
|--|---------------|------------------|-----------|
| —Opportunity Revenue | | X | X |
| —Expected Revenue | | X | X |
| Funds (Through Accts) (Consumer Goods) | | | X |
| Promotions (Through Accts) (Consumer Goods) | | | X |
| Holdings (Financial Services & Life Sciences) | | X | |
| Households | | | X |
| Opportunity | | X | X |
| Orders | | X | X |
| Organization (OLTP) | | X | |
| Programs | | | X |
| Quotes | | X | X |
| Responses | X | | |
| Review Or Objective (OLTP) | | X | |
| Segment | | X | X |
| Service Requests | X | | X |
| W_ACT_PROD_F (Financial Services & Life Sciences) | | X | |
| W_MED_ED_F (Financial Services & Life Sciences) | | X | |
| W_OBJECTIVE_F (Financial Services & Life Sciences) | | X | |
| W_PER_RANK_F (Financial Services & Life Sciences) | | X | |
| W_SYND_DATA_F (Financial Services & Life Sciences) | | X | |
| W_SYND_MKT_F (Financial Services & Life Sciences) | | X | |

The security definition for the dimension decides the general area within which the user operates. The reports can further restrict access to the data within the report. For example, if a report contains a filter such as `Employee.Login = valueof (USER)`, then this restricts the rows returned in the report to those where the user is the owner of the record.

Implementing Data-Level Security in the Siebel Analytics Repository

NOTE: Data-level security in Siebel Analytics applications is based on the position- and organization-based security model of the Siebel operational applications. For more information, see *Security Guide for Siebel eBusiness Applications*.

This section describes the configuration of data from the Siebel Data Warehouse, and refers only to the Data Warehouse tables. The setup for the Siebel transactional database (OLTP) data is similar, although the physical schema joins are different.

Data-level security in the Analytics repository is implemented in three major steps:

- 1** Set up initialization blocks that obtain specific security-related information, such as the user's primary position ID, when a user logs in.
- 2** Set up the joins to the appropriate security tables in the metadata physical and logical layers.
- 3** Set up the filters for each security group on each logical table that needs to be secured.

For more information about security groups and filters as well as on how to set up joins in the repository, see *Siebel Analytics Server Administration Guide*.

In the Siebel Analytics repository, the initialization blocks have already been set up for obtaining a given user's primary position, primary organization, and the owner ID. There are three initialization blocks:

- **Primary Position ID**

This initialization block obtains the primary position of the given user, based on the user's login, and populates the variable `PRIMARY_POSTN_ID`. The SQL used by the block is run against the Siebel transactional database, and therefore reflects real-time position ID information.

- Orgs for Org-based Security

This initialization block obtains the list of organizations that a given user belongs to from the Siebel transactional database. The variable populated is ORGANIZATION.

- Primary Owner ID

This initialization block obtains the owner ID for the given user. It obtains this information from the Siebel transactional database and populates the PR_OWNER_ID variable.

There are also preconfigured groups that have been set up with filters on several logical dimensions. The two groups that have filters on them are Primary Position-based Security and Primary Org-based Security. [Table 18 on page 199](#) shows the logical tables and the kind of security applied on those tables.

An example of how to configure the Opportunity Dimension is given as follows.

```
“W_PARTY_LOGIN (W_OPTY_D).PARTY_ID = W_OPTY_D.VIS_PR_POS_ID
```

W_PARTY_LOGIN is the security table that stores recursive information about a given user’s login and the parties (positions and organizations, employees) that report to the user through a hierarchical reporting mechanism. There is an alias setup on W_PARTY_LOGIN for each join with a dimension.

You can add security to a new dimension—for example, W_AGREE_D (Agreements).

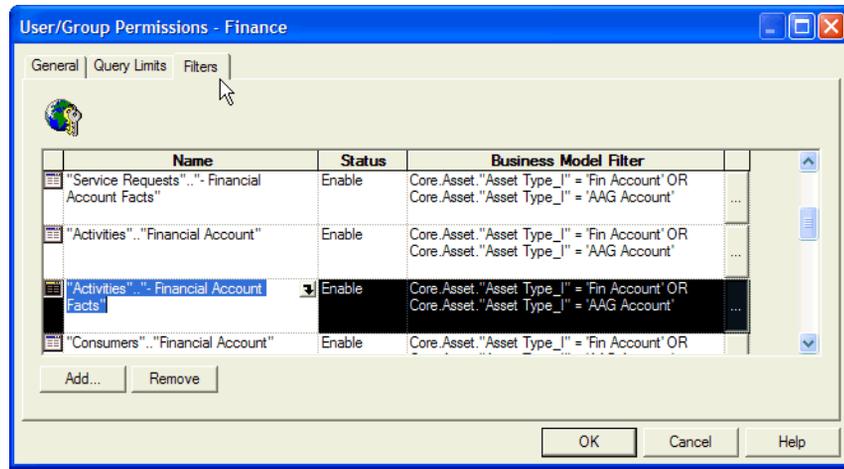
To configure the physical table join between W_OPTY_D and W_PARTY_LOGIN

- 1 Create an alias on W_PARTY_LOGIN specifically to join to W_AGREE_D.
- 2 Configure the join in the physical layer.
- 3 Configure a logical table join by adding the appropriate tables in the business layer.

NOTE: The columns VIS_PR_POS_ID and VIS_PR_BU_ID in the dimensional tables contain the record's primary owning position and owning organization.

- 4 Configure the filter on the logical tables that restrict the data.

- a To set up a filter, right-click on the group and choose Properties.
- b In the Properties dialog box, click on the Permissions box and select the Filter tab, as shown in the following screen:



- c To add a new filter, click on the ellipsis box and find the business model layer table that needs to be secured.
- d Configure the WHERE clause on the table so that the data is filtered.

Organization-based security has been implemented using the row-wise initialized variable ORGANIZATION. This implementation is slightly different from that of the position-based security, because the number of organizations is usually limited, compared to the number of positions in a given environment. Therefore, using the row-wise initialized variable ORGANIZATION to filter data using a WHERE IN clause is efficient. However, joining the dimension with the W_PARTY_LOGIN is more efficient, because the number of positions used for filtering the data can be large.

Position and Organization Initialization Variables in Siebel Analytics Applications

The Siebel Analytics repository contains two preconfigured initialization blocks for Position-based and Organization-based security. These initialization blocks populate the variables PRIMARY_POSTN_ID and ORGANIZATION. The variable ORGANIZATION is a row-wise initialized variable that contains a list of the organizations that the user belongs to. (For more information on row-wise initialized variables, see *Siebel Analytics Server Administration Guide*.) You can set up a similar variable that is a union of all the positions and organizations that the user has access to. To set up such a variable, do one of the following:

- Use the W_PARTY_LOGIN table in the data warehouse.
- Get this variable directly from the Siebel transactional database for a real-time list.

Getting the variable directly from the Siebel transactional database requires an understanding of the Siebel data model with reference to security. For each user login, the W_PARTY_LOGIN table has a recursive list of all positions and organizations. The logical equivalent of this setup is:

```
W_PARTY_LOGIN.PARTY_ID = valueof(NQ_SESSION.POSTN_ORG_UNION)
W_OPTY_PARTY.PARTY_ID = W_PARTY_LOGIN.PARTY_ID and
W_OPTY_PARTY.OPTY_ID = W_OPTY_ID.ROW_ID
```

In an alternative implementation, use an additional join between W_PARTY_LOGIN and W_[DimensionName]_PARTY instead of using the row-wise initialization. In the case of Opportunities, for example, this can be set up as shown:

```
W_PARTY_LOGIN.LOGIN = valueof(NQ_SESSION.USER) and
W_OPTY_PARTY.PARTY_ID = W_PARTY_LOGIN.PARTY_ID and
W_OPTY_PARTY.OPTY_ID = W_OPTY_ID.ROW_ID
```

These two joins have the same effect as the earlier row-wise initialization variable solution, but contain an additional table join.

Default Security Settings in Siebel Analytics Applications

The User Administrator and the Group Administrators are a special user and group that do not have any restrictions and do not go through the Siebel database. The User SADMIN (password SADMIN) is also a special user, similar to Administrator.

NOTE: Be sure to change the default password before migrating to production.

The group Siebel Administrator is set up as a member of the supergroup Administrators, so members of this group have no restrictions.

Siebel eBusiness Applications Security

Siebel eBusiness Applications include Siebel Sales, Siebel Service, and Siebel Partner Relationship Management. This section describes the additional security configurations that may be necessary for your Siebel eBusiness Applications. It also describes the particular responsibilities associated with the application dashboards.

The section includes the following subtopics:

- [“Sales Analytics Security Settings” on page 205](#)
- [“ERM Analytics Security Settings” on page 208](#)
- [“Partner Relationship Management Security Settings” on page 210](#)
- [“Consumer Sector Security Settings” on page 219](#)
- [“Communications, Media, and Energy \(CME\) Security Settings” on page 219](#)
- [“Financial Services Security Settings” on page 221](#)
- [“Life Sciences Security Settings” on page 223](#)

Sales Analytics Security Settings

Siebel Sales Analytics defaults to the following data-level visibility for certain responsibilities, as shown in [Table 19](#).

Responsibilities and Data-Level Visibility in Siebel Analytics Applications

The visibility restrictions imposed vary by responsibility and by logical subject area.

- The Sales Manager has different visibility restrictions imposed in the Forecasting subject area than in the Pipeline, Customers, Orders, and Products subject areas.
- In general, users with the VP of Sales Analytics responsibility have no data-level security imposed, while those with the Sales Manager Analytics or Field Sales Representative Analytics responsibilities have primary-position security imposed.
- In primary position security, only those opportunities, orders, or forecasts owned by the user or the user's subordinates are visible to the user.

For a description of data-level security, see [“Integrated Security for Responsibilities and Groups in Siebel Analytics Applications” on page 191](#) and *Security Guide for Siebel eBusiness Applications*.

Table 19. Siebel Sales Analytics Default Data-Level Visibility

| Responsibility | Subject Area | Default Visibility |
|---|--------------|---|
| VP of Sales Analytics | All | No data-level security is imposed. |
| Sales Manager Analytics Field Sales Representative Analytics | Forecasting | In addition to the Order, Opportunity, and Forecast dimensions, primary position data-level security is imposed on all facts. This means that these subject areas are visible to the user only for data owned by the user (or the user's subordinates). |

Table 19. Siebel Sales Analytics Default Data-Level Visibility

| Responsibility | Subject Area | Default Visibility |
|---|---------------------------------|---|
| Sales Manager Analytics Field Sales Representative Analytics | Pipeline Orders Customers | Primary position data-level security is imposed on: <ul style="list-style-type: none"> ■ Order dimension ■ Opportunity dimension ■ Account dimension ■ Opportunity Revenue, Expected Revenue, and Closed Revenue metrics ■ Number of Orders Line Item Order Revenue (000) Line Item Shipped Revenue (000) Order Item Revenue Rollup Total Order Revenue (000) Rollup Average Order Size Total Order Revenue Total Order Revenue (000) Total Shipped Revenue Total Shipped Revenue (000) metrics |
| TeleMarketing Manager TeleMarketing Representative | All | No specific data-level security. |
| TeleSales Representative Direct Order Entry Agent | All | No specific data-level security. However, the primary-position security used for Sales Managers and Representatives can be used for the TeleSales Representative and Direct Order Entry Agent responsibilities as well. Note that the security model for the TeleMarketing Representative and Manager responsibilities must differ from that used for Sales Managers and Representatives. The security model is based on the CREATED_BY column in the Opportunity data model and not on the primary owner of the opportunity. |

To extend these data-level visibility restrictions to other metrics and dimensions, refer to [Table 18 on page 199](#) and use the metrics and dimensions in [Table 19](#) as examples.

ERM Analytics Security Settings

Siebel ERM Analytics is divided into Workforce, Partner Manager, and Partner Portal Analytics.

Workforce Analytics Responsibilities and Security Settings

Siebel Responsibilities for Workforce Analytics are shown in [Table 20](#).

Table 20. Siebel Responsibilities for Workforce Analytics

| Responsibility | View Name | SSO Symbolic URL Name | Dashboard Name | Viewable Pages | Subject Areas |
|-----------------------|------------------------|-----------------------------|----------------------|-------------------------|-----------------------|
| ERM Analytics VP | SSO ERM Dashboard View | SSO ERM Executive Dashboard | Employee Performance | Organizational Overview | Workforce Summary |
| | | | | Team Status | Workforce Training |
| | | | | Training | Workforce Performance |
| | | | | Performance Management | |
| | | | | My Performance | |
| ERM Analytics Manager | SSO ERM Dashboard View | SSO ERM Executive Dashboard | Employee Performance | Team Status | Workforce Summary |
| | | | | Training | Workforce Training |
| | | | | Performance Management | Workforce Performance |
| | | | | My Performance | |

Table 20. Siebel Responsibilities for Workforce Analytics

| Responsibility | View Name | SSO Symbolic URL Name | Dashboard Name | Viewable Pages | Subject Areas |
|------------------------------|---------------------------------|-----------------------------|--------------------------|------------------------|-----------------------|
| ERM Analytics User | SSO ERM Dashboard View | SSO ERM Executive Dashboard | Employee Performance | My Performance | Workforce Summary |
| | | | | | Workforce Training |
| | | | | | Workforce Performance |
| ERM Analytics HR | SSO ERM HR Dashboard View | SSO ERM HR Dashboard View | Human Resource Analytics | Training | Workforce Summary |
| | | | | Performance Management | Workforce Training |
| | | | | | Workforce Performance |
| ERM Analytics HelpDesk | SSO ERM HelpDesk Dashboard View | SSO ERM HelpDesk View | HelpDesk Analytics | Overview | Service Request |
| | | | | Staff Performance | |
| ERM Analytics HelpDesk Agent | SSO ERM HelpDesk Dashboard View | SSO ERM HelpDesk View | HelpDesk Analytics | Agent Performance | Service Request |

Table 20 also outlines the symbolic URL names for Workforce Analytics. To change or to update these symbolic URLs with more dashboards, see the section [“Customizing the Analytics Content on the Siebel Operational Application Home Page”](#) on page 315.

Partner Relationship Management Security Settings

Siebel PRM Analytics incorporates the concept of role-based analytics. Role-based analytics provides brand owners the ability to display dashboards and pages to users based on their specific roles. For example, a sales manager would have the ability to view dashboards related to pipeline and sales effectiveness, whereas the marketing manager would have the ability to view dashboards related to campaigns. Siebel PRM Analytics also includes flexible security mechanisms to control access to subject areas and to data.

The Analytics roles map to Siebel Responsibilities in the Siebel operational application. This section describes the roles and associated dashboards and pages for both partner Manager and Partner Portal applications. It also includes subject area and data-level security settings for responsibilities.

Partner Manager Role-Based Dashboard Mapping

[Table 21](#) provides the dashboard and page tab mapping for specific responsibilities in the Siebel PRM Partner Manager application.

Table 21. Siebel Responsibilities for PRM Analytics

| Responsibility | Dashboard | Page Tab Name |
|---|-------------------|------------------|
| Channel Account Manager Analytics User | Channel Customers | Overview |
| | Channel Customers | Sales |
| | Channel Sales | Products |
| | Channel Sales | Sales |
| | Channel Service | Products |
| | Channel Service | Service |
| | Channel Training | Training Profile |

Table 21. Siebel Responsibilities for PRM Analytics

| Responsibility | Dashboard | Page Tab Name |
|----------------------------------|--|-----------------------|
| Channel Executive Analytics User | Channel Customers | Customer Profile |
| | Channel Executive | Customer Satisfaction |
| | Channel Executive | Pipeline |
| | Channel Executive | Product |
| | Channel Executive | Program |
| | Channel Executive | Revenue |
| | Channel Executive | Service |
| | Channel Segmentation | Channel Mix |
| | Channel Segmentation | Partner Territory |
| | Channel Segmentation | Partner Tier |
| | Channel Segmentation | Partner Type |
| | Channel Marketing Manager Analytics User | Channel Customers |
| Channel Customers | | Sales |
| Customer Marketing | | Effectiveness |
| Customer Marketing | | Responses |
| Customer Marketing | | ROI |

Table 21. Siebel Responsibilities for PRM Analytics

| Responsibility | Dashboard | Page Tab Name |
|-----------------------------------|----------------------|-----------------------|
| Channel Operations Analytics User | Channel Commerce | Orders |
| | Channel Commerce | Overview |
| | Channel Commerce | Quotes |
| | Channel Commerce | Products |
| | Channel Customers | Overview |
| | Channel Customers | Sales |
| | Channel Customers | Service |
| | Channel Marketing | Effectiveness |
| | Channel Marketing | Overview |
| | Channel Sales | Margins |
| | Channel Sales | Pipeline |
| | Channel Sales | Revenue |
| | Channel Sales | Sales Cycle |
| | Channel Sales | Wins |
| | Channel Segmentation | Partner Territory |
| | Channel Segmentation | Partner Tier |
| | Channel Segmentation | Partner Type |
| | Channel Service | Customer Satisfaction |
| | Channel Service | Overview |
| | Channel Service | Products |
| | Channel Service | Resolution Time |
| | Channel Service | Service Requests |
| | Channel Training | Overview |
| Channel Training | Performance | |

Partner Portal Role-Based Dashboard Mapping

The dashboard and page tab mapping for specific responsibilities in the Siebel PRM Partner Portal application are shown in [Table 22](#).

Table 22. Responsibilities for PRM Partner Portal Analytics

| Responsibility | Dashboard | Page Tab Name |
|--------------------------------------|-------------------|---------------------|
| Partner Executive Analytics User | Partner Executive | Pipeline |
| | Partner Executive | Products |
| | Partner Executive | Sales Effectiveness |
| | Partner Executive | Service |
| Partner Operations Analytics User | Partner Commerce | Overview |
| | Partner Commerce | Products |
| | Partner Marketing | Overview |
| | Partner Marketing | ROI |
| | Partner Sales | Pipeline |
| | Partner Sales | Revenue |
| | Partner Service | Customer Sat |
| | Partner Service | Overview |
| | Partner Service | Service Requests |
| | Partner Training | Training |
| Partner Sales Manager Analytics User | Partner Commerce | Orders |
| | Partner Commerce | Overview |
| | Partner Commerce | Quotes |
| | Partner Sales | Pipeline |
| | Partner Sales | Revenue |
| | Partner Sales | Subordinates |
| | Partner Training | Subordinates |

Table 22. Responsibilities for PRM Partner Portal Analytics

| Responsibility | Dashboard | Page Tab Name |
|--|------------------|----------------------|
| Partner Sales Rep Analytics User | Partner Commerce | Orders |
| | Partner Commerce | Overview |
| | Partner Commerce | Quotes |
| | Partner Sales | Pipeline |
| | Partner Sales | Revenue |
| | Partner Sales | Subordinates |
| | Partner Training | Subordinates |
| Partner Service Manager Analytics User | Partner Service | Customer Sat |
| | Partner Service | Overview |
| | Partner Service | Service Requests |
| | Partner Service | Subordinates |
| | Partner Training | Subordinates |
| Partner Service Rep Analytics User | Partner Service | Overview |
| | Partner Service | Service Requests |
| | Partner Service | Subordinates |
| | Partner Training | Subordinates |

PRM Analytics Subject Area Mapping

Using Siebel PRM Analytics, you can conduct ad hoc queries based on your responsibilities. Ad hoc queries are built by the user, based on columns in subject areas in the Analytics application. By restricting visibility to subject areas based on responsibilities, Siebel PRM Analytics provides brand owners a flexible way to deploy role-based analytics. Details regarding securing subject areas are provided in [Chapter 5, “Siebel Analytics User Authentication and Security Setup.”](#)

The subject area visibility for responsibilities in Partner Manager are shown in [Table 23](#).

Table 23. Responsibilities for PRM Partner Manager Analytics

| Subject Area | Channel Executive Analytics User | Channel Operations Analytics User | Channel Account Manager Analytics User | Channel Marketing Manager Analytics User |
|-----------------------|---|--|---|---|
| Activities | X | X | X | X |
| Assets | X | X | X | |
| Campaigns | X | X | X | X |
| Consumers | X | X | X | X |
| Customer Satisfaction | X | X | X | |
| Customers | X | X | X | X |
| Orders | X | X | X | X |
| Partner Training | X | X | X | |
| Partners | X | X | X | X |
| Pipeline | X | X | X | X |
| Pricing | X | X | X | X |
| Products | X | X | X | X |
| Real-Time Activity | | | | |
| Real-Time Assets | | | | |
| Service Requests | X | X | X | |

X indicates that subject area is visible for the user holding that responsibility.

The subject area visibility for roles in Partner Portal is shown in [Table 24](#).

Table 24. Subject Area Visibility for PRM Partner Portal

| Subject Area | Partner Executive Analytics User | Partner Operations Manager Analytics User | Partner Sales Manager Analytics User | Partner Sales Rep Analytics User | Partner Service Manager Analytics User | Partner Service Rep Analytics User |
|-----------------------|----------------------------------|---|--------------------------------------|----------------------------------|--|------------------------------------|
| Activities | X | X | X | X | X | X |
| Assets | X | X | | | X | X |
| Campaigns | X | X | | | | |
| Consumers | X | X | | | | |
| Customer Satisfaction | X | X | | | X | X |
| Customers | X | X | X | X | X | X |
| Orders | X | X | X | X | X | X |
| Partner Training | X | X | X | X | X | X |
| Partners | X | X | | | | |
| Pipeline | X | X | X | X | | |
| Pricing | | | | | | |
| Products | X | X | X | X | X | X |
| Real-Time Activity | | | | | | |
| Real-Time Assets | | | | | | |
| Service Requests | X | X | | | X | X |

X indicates that subject area is visible for the user holding that responsibility.

PRM Analytics Data-Level Visibility

Siebel PRM Analytics also provides brand owners the ability to restrict security based on the user's organization or position. This security mechanism makes sure that one user does not have access to another user's data. It also makes sure that one partner does not have access to another partner's data. Data-level security is administered for responsibilities. Details regarding setting up data-level visibility are provided in the section [“Integrated Security for Responsibilities and Groups in Siebel Analytics Applications”](#) on page 191.

Table 25 shows the data-level security settings included for the responsibilities in Partner Manager and Partner Portal.

By default, Partner Service Representative and Sales Representative have been set up for Primary position-based security. Some deployments may choose to change it to Organization-based security, using the following procedure.

To change the security group from Position-based to Organization-based

- 1 In the Siebel Analytics Administration Tool, go to Tools > Manage Security.
- 2 Click on Hierarchy.
- 3 Make the two security groups (Partner Service Representative and Partner Sales Representative) members of the Primary Org-Based group.
- 4 Remove the groups from the Primary Position-Based group.
- 5 Exit the Administration Tool.

Table 25. Siebel PRM Data-Level Security Settings

| Responsibility | Data-Level Security | Type | Comments |
|--|---------------------|------|----------|
| Channel Executive Analytics User | No | N/A | N/A |
| Channel Operations Analytics User | No | N/A | N/A |
| Channel Account Manager Analytics User | No | N/A | N/A |

Table 25. Siebel PRM Data-Level Security Settings

| Responsibility | Data-Level Security | Type | Comments |
|--|----------------------------|--------------|--|
| Channel Marketing Manager Analytics User | No | N/A | N/A |
| Partner Executive Analytics User | Yes | Organization | Displayed records should match organization of the user. |
| Partner Sales Manager Analytics User | Yes | Organization | Displayed records should match organization of the user. |
| Partner Sales Rep Analytics User | Yes | Position | Displayed records should match position of the user. |
| Partner Service Manager Analytics User | Yes | Organization | Displayed records should match organization of the user. |
| Partner Service Rep Analytics User | Yes | Position | Displayed records should match position of the user. |

Siebel Industry Applications Security

This section describes the additional security configurations that may be necessary for your Siebel Industry Applications. It also describes the particular responsibilities associated with the application dashboards.

Consumer Sector Security Settings

Table 26 describes the consumer sector responsibilities associated with each CS Dashboard.

Table 26. Consumer Sector Responsibilities Associated with Each CS Dashboard

| Screen Name | Siebel Responsibility | Dashboard | Pages |
|-----------------|-----------------------|---------------------|--|
| Sales Analytics | VP Sales | VP Sales | Business Overview, Product Overview |
| | | Sales Performance | Sales Volume Planning, Hierarchy, Trends, Growth |
| | | Promotion | Plan Year to Date, Corporate |
| | Key Account Manager | Key Account Manager | Business, Category |
| | | Promotion | Plan year to date, Key account |
| | | Funds | Account |
| | | Retail Audit | Last audit, Trends |
| | | Sales Performance | Sales Volume Planning, Hierarchy, Trends, Growth |

Communications, Media, and Energy (CME) Security Settings

Siebel Communications, Media, and Energy Analytics applies the Siebel eBusiness Applications security model. That is, it uses Siebel eBusiness Applications responsibilities (and corresponding repository and Web catalog groups) for controlling access to Siebel eBusiness Applications objects (both metadata and Web catalog objects). This security model is described in [“Integrated Security for Responsibilities and Groups in Siebel Analytics Applications”](#) on page 191.

In addition to responsibilities provided by the Siebel eBusiness Applications, Siebel Communications, Media, and Energy (CME) provides additional responsibilities, and responsibility-specific security, as indicated in [Table 27](#).

Table 27. CME Responsibilities Associated with Each CME Dashboard

| Screen Name | CME Responsibility | CME Dashboard | Dashboard Pages |
|---------------------|---|--------------------|---|
| Marketing Analytics | CM Marketing Analytics User CM Marketing Analytics Administrator | Loyalty Management | <ul style="list-style-type: none"> ■ Customer Lifetime Value ■ Churn Propensity ■ Selling Propensity ■ Financial Risk ■ Actual Churn |
| Sales Analytics | CM Sales Analytics User CM Sales Analytics Administrator | Revenue Management | <ul style="list-style-type: none"> ■ Sales Portal ■ Service Activations ■ Service Modifications ■ Service Disconnections |
| | | Account Management | <ul style="list-style-type: none"> ■ Sales Portal ■ Service Activations ■ Service Modifications ■ Service Disconnections |
| Service Analytics | CM Service Analytics User CM Service Analytics Administrator | Account Management | <ul style="list-style-type: none"> ■ Trouble Tickets ■ Customer Satisfaction |

Financial Services Security Settings

Siebel eFinance Analytics, eInsurance Analytics, and eHealthcare Analytics apply the Siebel eBusiness Applications security model. That is, they use Siebel eBusiness Applications responsibilities (and corresponding repository and Web Catalog groups) for controlling access to Siebel eBusiness Applications objects (both metadata and Web catalog objects). This security model is described in [“Integrated Security for Responsibilities and Groups in Siebel Analytics Applications” on page 191](#).

In addition to responsibilities provided by the Siebel eBusiness Applications, Siebel eFinance Analytics, eInsurance Analytics, and eHealthcare Analytics provide additional responsibilities, and responsibility-specific security, as indicated in [Table 28 on page 222](#).

For the Financial Services products mentioned, the Siebel eBusiness Applications security model has been extended:

- One finance-specific responsibility (and corresponding repository and Web catalog group) called Finance Analytics User; this responsibility must be used in conjunction with Siebel eBusiness Applications responsibilities and groups to control access to Finance-specific objects in eFinance Analytics.
- One Insurance-specific responsibility (and corresponding repository and Web catalog group) called Insurance Analytics User; this responsibility must be used to control access to the Insurance and Healthcare-specific objects in eInsurance and eHealthcare Analytics.

For example, when you give a user all horizontal Sales responsibilities and also include the finance responsibility called Finance Analytics User, this user will be able to see all horizontal sales objects (Dashboards, Subject Areas, folders in the presentation Layer, and so on) and in addition, all finance-specific Sales objects. Similarly, in order to see Insurance and Healthcare-specific objects, you need to add the Insurance Analytics User responsibility to this user.

Because Siebel Analytics supports hierarchies in the groups in the repository, there are certain groups within the Analytics repository that are parent groups that define the behavior of all the child groups.

- Finance: Parent group for all Financial applications group (Finance Analytics User is a child Group of Finance Group)

- Insurance: Parent group for all Insurance applications group (Finance Analytics User is a child Group of Finance Group)

Inheritance is used to let permissions ripple through to child groups. The parent groups for Financial Services and their purpose are shown in [Table 28 on page 222](#).

NOTE: A Financial Services Analytics user is provided as a child to both Finance and Insurance. Therefore this user has permissions available to both Finance and Insurance. If you have purchased both Finance Analytics and Insurance Analytics, you should use the Financial Services Analytics user responsibilities to view all relevant dashboards.

Table 28. FS Responsibility Required to View a FS Dashboard

| FS Responsibilities | Dashboards |
|------------------------|----------------------------------|
| Finance Analytics User | Credit |
| | Credit Card |
| | Private Banking |
| | Consumer Banking |
| | Corporate and Commercial Banking |
| | Investment Holdings |
| | Separate Account Management |
| | Wealth Management |
| | Institutional Sales |
| | Investment Banking |
| | Finance Marketing |
| | Finance Executive |

Table 28. FS Responsibility Required to View a FS Dashboard

| FS Responsibilities | Dashboards |
|--------------------------|-----------------------------|
| Insurance Analytics User | Policy Sales |
| | Policy Service |
| | Insurance Marketing |
| | Insurance Executive |
| | Insurance Claims |
| | Health Plan Sales |
| | Health Plan Service |
| | Health Plan Marketing |
| | Health Plan Executive |
| | Insurance Agents / Partners |

Life Sciences Security Settings

This section covers security in Life Sciences Analytics.L

Data-level security in Siebel Pharma Analytics is based on Siebel Position ID for all Pharma Analytics responsibilities, except PH Executive Analytics. Siebel Position ID is always resolved through the fact table.

Data visibility is unconstrained for administrative roles. For other roles, data visibility is controlled by one of two forms of position-based security, brick or ZIP Code. The Siebel Data Warehouse stores the position-to-brick or -ZIP Code relationship in the W_ALIGNMT_DH table, align_item_type = Zipcode or Brick. The user-to-position relationship is stored in the W_PARTY_LOGIN table. A user sees only the data from the bricks or ZIP Codes that are available to that user’s positions. This security model is enforced for all queries, with the exception of queries that deal exclusively with these elements:

- Time Period
- Product

- Invitee Status

Table 29 shows Pharma Analytics Responsibilities and Functions.

Table 29. Pharma Analytics Responsibilities and Functions

| Responsibility | Use |
|--------------------------------------|---|
| LS Administrator | Administrator privileges to all options on Pharma Analytics. |
| PH US Sales Analytics User | Enables access to Rx Sales Analytics dashboard, pages, reports, and sales effectiveness subject area using ZIP-to-territory alignment measures. |
| PH EMEA Sales Analytics User | Enables access to Rx Sales Analytics dashboard, pages, reports, and sales effectiveness subject area using brick-to-territory alignment measures. |
| PH Sales Analytics Administrator | Administrator privileges to Rx Sales Analytics option. |
| PH US Marketing Analytics User | Enables access to Pharma ROI, Call Activity Profit & Loss Report using ZIP Code territory alignment and Pharma Promotional Effectiveness Subject Area, and the MedEd ROI dashboards and reports and Medical Education Effectiveness Subject Area. |
| PH EMEA Marketing Analytics User | Enables access to Pharma ROI, Call Activity Profit & Loss Report using brick territory alignment and Pharma Promotional Effectiveness Subject Area, and Medical Education Effectiveness Subject Area with brick territory alignment. |
| PH Marketing Analytics Administrator | Administrator privileges to Pharma ROI, Call Activity Profit & Loss Report, Pharma Promotional Effectiveness Subject Area, and Medical Education Effectiveness Subject Area. |
| PH Mobile Analytics User | Enables access to Sales Rep Analytics option. |
| PH Mobile Analytics Admin | Administrator privileges to Sales Rep Analytics option. |

Table 29. Pharma Analytics Responsibilities and Functions

| Responsibility | Use |
|--------------------------------------|--|
| PH Medical Education Analytics User | Enables access to Medical Education Analytics option. |
| PH Medical Education Analytics Admin | Administrator privileges to Medical Education Analytics option. |
| PH US Call Activity Analytics User | Enables access to Call Activity Analytics Option for ZIP territory alignments. |
| PH EMEA Call Activity Analytics User | Enables access to Call Activity Analytics Option for brick territory alignments. |
| PH Call Activity Analytics Admin | Administrator privileges to Call Activity Analytics option. |
| PH US Executive Analytics User | Unrestricted access to all Pharma Analytics options with ZIP-based territories. |
| PH EMEA Executive Analytics User | Unrestricted access to all Pharma Analytics options with brick territories. |
| PH Executive Analytics Admin | Unrestricted access to all Pharma Analytics options with ZIP territories. |

Siebel Analytical Applications Metadata **10**

Data warehouses typically have many components, each having its own security attributes and complexities. All the rules for security, data modeling, aggregate navigation, caching, and connectivity for the Siebel Data Warehouse are stored in metadata repositories on the Siebel Analytics Server.

Siebel eBusiness Applications (the Siebel operational applications such as Siebel Sales, Siebel Service, and Siebel Call Center) are shipped with certain Siebel Analytics metadata. This chapter covers the Siebel Analytics metadata for Siebel eBusiness Applications, especially those areas that a Siebel administrator may need to adjust for specific Analytics purposes.

This chapter describes the administrative tasks necessary to configure Siebel Analytics for special purposes in Siebel eBusiness Applications. These administrative tasks generally cover two areas:

- [“About Dashboards in Siebel Analytics Applications” on page 228](#)
- [“Metadata Requirements for Sales Analytics Applications” on page 229](#)

About Siebel Analytics Applications Licensing

If you have purchased a Siebel Analytics application, the Siebel Analytics repository (.rpd) file is generated based on the license keys for that application. For example, if you did not license Siebel Delivers, this product will not be installed. Siebel Analytics licensing may significantly reduce the size of your repository file, depending on the specific Siebel Analytics application that you purchased. If you have licensed Siebel Sales Analytics, you will be able to view and use only those Siebel Analytics dashboards, subject areas, and reports related to Sales Analytics.

The Siebel Analytics application licensing feature trims only the repository. The Web Catalog is not trimmed. It is recommended that you do trim the Web Catalog and remove those dashboards that are not relevant to your business needs. (Dashboards and reports are organized in shared folders according to the business areas. For example, all objects included under Marketing Analytics are stored in the `/shared/Marketing` folder.)

NOTE: You can also edit the repository file and make it smaller to provide improved performance.

About Dashboards in Siebel Analytics Applications

Dashboard content is related to Siebel Responsibility. A Siebel Analytics user's access depends on that user's responsibility. The Siebel administrator can change the default settings for responsibilities or change the default data-level security settings. This section covers administration of dashboard content.

Configuring Siebel Applications for Attribute Analysis

In order for Attribute Analysis to function properly, the sequence number associated with a class attribute must be set properly. The sequence numbers assigned to the Attributes must be unique. If the sequence number associated with an attribute is not unique, the Siebel Data Warehouse ETL process cannot distinguish between two attributes with the same sequence number, possibly resulting in the ETL process crashing and in flawed analyses.

To configure the attribute sequence numbers

- 1** From the Siebel operational application Site Map, select Application Administration > Class Administration.
- 2** In the Classes Applet, select the class whose attributes are going to be analyzed.
- 3** Select the Dynamic attributes child level applet, and from the applet menu select columns displayed.
- 4** Display the Analytics Sequence # column.

- 5 For each row in the Dynamic Attributes applet, enter a unique sequence number in the Analytics Sequence# column. If a sequence number already exists, change the sequence number to a unique value.
- 6 Repeat [Step 2](#) through [Step 5](#) for all the classes whose attributes will be analyzed.

Metadata Requirements for Sales Analytics Applications

This section covers the Siebel Analytics metadata for Siebel Sales Analytics, especially those areas that a Siebel administrator may need to adjust for specific analytics purposes.

Sales Analytics comprises these primary topics:

- [“Forecast Analytics” on page 229](#)
- [“Configuring Forecast, Quota, and Actual Analytics” on page 232](#)
- [“Currency Conversion” on page 240](#)
- [“Performance” on page 241](#)

This material is intended for the administrator and business owners responsible for Siebel Sales Analytics deployment.

Forecast Analytics

Siebel Sales Analytics provides several forecasting analytics reports preconfigured in both the Pipeline and Sales Effectiveness dashboards. This new feature performs real-time and historical analyses of forecast data to help manage each quarter’s expectations and results better.

To enable the forecasting charts included in these dashboards, the administrator needs to perform several group administration tasks.

To enable the dashboard forecasting charts

- 1 Log in to Siebel Analytics as administrator and navigate to the Answers > Analytics Web Administration view.

- 2** Go to Manage Web Groups & Users. In the No Forecasting Web group, click Edit (this icon resembles a hand).
- 3** Click the delete icon (X) to delete Authenticated Users from the Group Members section of this group, then click Finished.
- 4** In the No Forecasting Lite group, click Edit.
- 5** Under the Group Membership section, click Add New Member and type the following group name in the Member Name box: Authenticated Users.
- 6** Click Add Member, then click Finished.

Siebel Sales Analytics also provides several preconfigured reports based on Expected Revenue for those customers that do not own Siebel Forecasting. The preconfigured dashboards display these charts by default.

Forecast Analytics Terms

Siebel Analytics contains several types of forecasting analyses, all based on the following basic metrics.

- **Summary Forecast** Derived from the summary-level forecast data displayed in the Forecast screen, Summary view. This data exists for a given position, for a given time period and for a specific date. For example, a Sales Manager reviewing her Summary Forecast sees that on August 10th, she forecasted \$6 million for the third quarter.
- **Detail Forecast** Derived from the detail-level forecast data displayed in the Forecast screen, Detail view. This metric allows the user to analyze his personal forecast details. As a result, in addition to position and time information, these details can provide Account, and Opportunity information, if the customer is using a Detail Forecast Series in which every subordinate passes detailed forecast information to her manager during the forecast submission process. If the customer uses a Summary Forecast Series in which only a subordinate's summary information is passed on to the manager, then no account or opportunity information will be available to the manager through this metric.

- **Frontline Forecast** Derived from the detail-level forecast data displayed in the Forecast screen, Detail view. The difference between Frontline and Detail forecast metrics is that the Frontline metric shows the detailed information from the original owner of the forecasted opportunity. In other words, this metric displays the detail information from the user's subordinates as well as her own. The result of this difference is that detailed information, such as Account and Opportunity information, is always available to the user because the metric finds all the opportunities in the forecast where they first appear—at the front lines of the organization. For example, a Sales Manager reviewing her Summary Forecast would see that on August 10th, her team in aggregate forecasted \$7 million for the third quarter based on several specific opportunities.
- **Archive Date** The date on which a Forecast is deemed to be completed and ready for archival in the Data Warehouse. This field can be found in the Forecast Administration screen, Forecast Series view, Forecast Series Dates applet. To display the date, go to Menu > Columns Displayed and select the Archive Date column.

Configuring Forecast, Quota, and Actual Analytics

Siebel Sales Analytics features the Siebel Forecasting module, which permits analysis by Forecast and by Actual versus Quota.

There are several administrative tasks to perform in order to allow Forecast and Actual versus Quota Analysis. These tasks are done in the Siebel Sales application and in the Siebel Forecasting module.

The business users must first decide what time period is the most meaningful for their business—typically it will be Quarter or Year—and then develop the business processes required to generate meaningful Forecasts and Quotas for that time period. Typically, Year-based processes will be built on monthly forecasts and annual quotas while Quarter-based processes will be built on weekly, or semi-weekly forecasts, and quarterly quotas. The base time period is important because the structure of the Quotas and Forecasts need a common base period in order to allow Forecasts and Quotas to be compared meaningfully.

Configuring Sales Quotas

The first task is to set up Sales Quotas that can be used to compare to both Forecast Revenue and Actual Revenue. Do this in the Siebel Sales application Sales Quota Administration screen.

To set up Sales Quotas

- 1 In the Quotas view, create a Quota that can be used to assign appropriate revenue quotas to everyone in the sales organization.

This same Quota is assigned to many Quota Plans in order for it to span quarters or years and for it to apply to everyone in the sales organization.

For example, you have created a Quota named *Quarterly Sales Organization Quotas* and have assigned it a Quota Type of Amount and a Performance Measure of Revenue, since you plan to use revenue as your basis of comparison with forecast and actual revenues.

- In the Quota Plans view, create all the relevant Quota Plans for the entire Sales Organization.

Each Plan has one specific time period associated with it, and carries one specific dollar amount for that period. So for each time period, multiple plans with multiple quota target revenues need to be created.

NOTE: The period associated with the Quota Plans must match the period used in the Forecast Series created in a later step.

As an example, you have created four separate plans for the first quarter of 2002—one each for Sales Representatives, Sales Managers, Sales Directors, and the Vice President of Sales. In the following figure, you have assigned each such plan an appropriate Period and designated them as Active. Although you have based the Quota Plans in this example on the positions of the quota plan participants, you could have based the plans on the revenue target to be associated with that plan, such as Q1 2002 \$1 million Quota Plan or Q1 2002 \$2 million Quota Plan.

The screenshot shows the Siebel Quota Administration interface. At the top, there are navigation tabs: Sales Quota Administration, Sales Quotas, Scheduling Administration, and Search Admin. Below these is a 'Show:' dropdown menu set to 'Quota Plans'. Underneath, there are sub-tabs: Quota Plans, Plan Quotas, Quota Plan Participants, Quotas, and Awards. The 'Quota Plans' sub-tab is active, and it contains a 'Query Results' table. The table has five columns: Name, Active, Period, Start, and End. There are four rows of data, all with 'Active' checked and 'Period' set to 'Q1 2002'.

| Name | Active | Period | Start | End |
|--|--------|---------|--------|---------|
| Q1 2002 Field Sales Director Quota | ✓ | Q1 2002 | 1/1/02 | 3/31/02 |
| Q1 2002 Field Sales Manager Quota | ✓ | Q1 2002 | 1/1/02 | 3/31/02 |
| Q1 2002 Field Sales Representative Quota | ✓ | Q1 2002 | 1/1/02 | 3/31/02 |
| Q1 2002 Field Sales VP Quota | ✓ | Q1 2002 | 1/1/02 | 3/31/02 |

3 Assign Quotas and revenue targets to each Quota Plan in the Plan Quotas view.

For each Quota Plan, the administrator needs to associate the Quota created in the first step to the plan, and needs to assign that quota an appropriate Target Revenue. For accurate analysis, it is important that only one Amount/Revenue Quota should be associated with any given Quota Plan.

In the Sales Quota Administration—Plan Quotas screen, in the following figure, the quota *Quarterly Sales Organization Quotas* is associated with the quota plan *Q1 Field Sales Representative Quota*, and an associated revenue target of \$2 million is also added to the quota plan.

| Quota | Performance Measure | Target Amount | Target Quantity |
|-------------------------------------|---------------------|----------------|-----------------|
| Quarterly Sales Organization Quotas | Revenue | \$2,000,000.00 | |

4 Associate the relevant participants to the Quota Plans created in the Quota Plan Participants view. For example, the upper applet (Quota Plan Participants) shows the quota plan *Q1 2002 Field Sales Representative Quota*, while the lower applet (Participants) shows the three Sales Representatives are associated with this quota plan.

Configuring Forecast Series

In the Siebel Sales application Forecast Administration screen, you set up a Forecast Series that can be used to compare to both Quota Target Revenue and Actual Revenue.

NOTE: For those customers that do not use Siebel Forecasting, these steps are unnecessary, because all forecasting charts for such customers are based on expected revenue, which is tracked and managed in the Opportunities screen and not in Siebel Forecasting.

To configure Forecast Series

- 1** In the Forecast Administration > Forecast Series > More Info view, create one Forecast Series for all members of the Sales Organization that can be used period after period.

In the following example, a forecast series called *Quarterly Sales Forecast with Details* has been created, and the relevant Auto Forecast Search Spec, Associated Search Spec, and Detail Level, as well as a weekly Interval, have been assigned to the series. Because the functional time period in this example is Quarter, use a weekly forecasting process. See *Siebel Forecasting Guide* for additional information on how to create and administer a forecast.

- In the Forecast Administration > Forecast Series > Forecast Series Dates view, establish the individual forecasts that comprise the Forecast Series.

Note that in the following figure, forecasts created in the Forecast Series span multiple quarters because Quarter is the base time period. If you use Year as your base time period, you need to create forecast series that span multiple years. Spanning time periods in the Forecast Series makes performing historical forecasting accuracy analysis significantly easier.

| More Info Forecast Series Dates Forecast Series Participants Forecast Series Organizations | | | | | | |
|--|------------|----------|-------------------|-------------------|-------------|--|
| New Query | | | | | | |
| Forecast Date | Start Date | End Date | History View Date | History Edit Date | Description | |
| 1/1/02 | 1/1/02 | 3/31/02 | | | | |
| 1/8/02 | 1/1/02 | 3/31/02 | | | | |
| 1/15/02 | 1/1/02 | 3/31/02 | | | | |
| 1/22/02 | 1/1/02 | 3/31/02 | | | | |
| 1/29/02 | 1/1/02 | 3/31/02 | | | | |
| 2/5/02 | 1/1/02 | 3/31/02 | | | | |
| 2/12/02 | 1/1/02 | 3/31/02 | | | | |
| 2/19/02 | 1/1/02 | 3/31/02 | | | | |
| 2/26/02 | 1/1/02 | 3/31/02 | | | | |
| 3/5/02 | 1/1/02 | 3/31/02 | | | | |
| 3/12/02 | 1/1/02 | 3/31/02 | | | | |
| 3/19/02 | 1/1/02 | 3/31/02 | | | | |
| 3/26/02 | 1/1/02 | 3/31/02 | | | | |
| 4/2/02 | 4/1/02 | 6/30/02 | | | | |
| 4/9/02 | 4/1/02 | 6/30/02 | | | | |
| 4/16/02 | 4/1/02 | 6/30/02 | | | | |
| 4/23/02 | 4/1/02 | 6/30/02 | | | | |
| 4/30/02 | 4/1/02 | 6/30/02 | | | | |
| 5/7/02 | 4/1/02 | 6/30/02 | | | | |
| 5/14/02 | 4/1/02 | 6/30/02 | | | | |

Forecast Series span multiple quarters by modifying the Start Date and End Date of the forecasts to reflect the Quarter in which the forecast falls. For example, the Start Date and End Date of the 4/2/2002 forecast are 4/1/2002 and 6/30/2002, respectively, while those of the 3/25/2002 forecast are 1/1/2002 and 3/31/2002, respectively.

Make sure that the Start and End Dates used in the various forecasts align perfectly with the Periods used in the Quota Plans created earlier.

- In the Forecast Series Participants view, add the appropriate people to the Forecast Series. In the following example, the same three Sales Representatives have been assigned to the quota plan *Q1 2002 Field Sales Representative Quota* and to the forecast series *Quarterly Sales Forecast with Details*.

The screenshot shows the Siebel Forecast Series Administration interface. The top navigation bar includes 'Forecast Administration', 'Business Process Administration', 'Fulfillment', and 'Group Administration'. The 'Forecast Administration' tab is active, showing a 'Forecast Series Participant' configuration window.

Forecast Series Configuration:

- Name:** Quarterly Sales Forecast With Details
- Description:** Quarterly Sales Forecast for SA
- Active:**
- Auto Forecast Search Spec:** [Calculated Primary Flag] = 'Y' and [Committed] = 'Y'
- Rollup Search Spec:** (Empty)
- Associate Search Spec:** [Calculated Primary Flag] = 'Y'
- Detail Depth:** Revenue Detail
- Visibility:** My Revenues
- Public:**

Below the configuration window, the 'Forecast Series Participants' tab is selected, displaying a table of participants:

| First Name | Last Name | Position |
|------------|-----------|---------------------------|
| Pat | Summers | Director, EMEA Sales |
| Todd | Olenik | Director, Worldwide Sales |
| Wasaka | Takuda | District Manager 1 |
| Kelly | Wilson | District Manager 2 |
| Terry | Smythe | District Manager 6 |
| Madison | Stern | Regional Manager |
| | | Siebel Administrator 2 |

Actual Revenue

Once the Quotas, Quota Plans, and Forecast Series are created, establish the Actual metric to be used in comparison with Forecast and Quota Revenue.

In Siebel Analytics, both Order Revenue and Shipped Revenue metrics are already provided with Siebel Sales Analytics.

- Order Revenue is calculated based on the date on which the order was received and is credited to the person holding the primary position on the order.

- Shipped revenue is based on when the line items in the order shipped and is also credited to the person holding the primary position on the order.

NOTE: The system administrator must work with the business analysts to determine the appropriate metric to use in comparison to Quota and Forecast.

Overlay Sales Forces

You configure Overlay Sales Force analysis in a similar way to the way you configure Forecast and Actual versus Quota for the non-overlay sales force. However, in order to accurately generate overlay forecasts, you must assign different Primary Representatives to child-level revenues. You must also establish the overlay forecast series so that it finds all such child-level revenues using the Primary Representative on the child-level records. Create a separate overlay sales quota in the same manner as the non-overlay quota plans. Once the independent overlay forecasts and quota plans are established, you can compare forecasts and quotas for overlay sales professionals.

The next task is to establish an actual revenue metric with team-based visibility (instead of primary representative-based visibility) so that all sales professionals on a given order get credit for that order. See *Siebel Forecasting Guide* for additional information on how to create and administer a forecast for a matrixed sales organization.

NOTE: The Revenues functionality is licensed with Siebel Forecasting and is not included in the base Siebel Sales.

Developing Charts Using Forecast, Quota, and Actual

Many of the standard Forecasting reports rely on the CURRENT_FCST_DATE Initialization Block variable. This variable finds the most recent forecast date *for the user of the report*, and not the most recent forecast date in the system.

The administrator who develops the Forecast, Quota, and Actual charts is usually not a member of the company Forecast Series group. Therefore, no valid forecast dates and, consequently, no CURRENT_FCST_DATE will be returned for the administrator. However, without a valid CURRENT_FCST_DATE, the Forecasting charts, which use this Initialization Block variable to find the current forecast, will return a No Results message for the administrator, thus making the development of forecast charts impossible.

To work around this, the administrator should, during development, remove the Primary_Postn_Id constraint from the CURRENT_FCST_DATE variable. Removing this constraint causes the variable to find the most recent forecast date in the entire system. This change makes development possible.

When development is completed, the administrator must return the Primary_Postn_Id constraint to the CURRENT_FCST_DATE Initialization Block variable so that the application user's most recent forecast is the one used. This Initialization Block is used in the following charts:

- Change in Forecast Details
- Change in Forecast Details Table
- Forecast versus Pipeline
- Change in Summary Forecast by Subordinate
- Forecast and Actual versus Quota by Subordinate
- W-E-B by Subordinate
- Detail Forecast by Industry Vertical
- Forecast versus Order Revenue by Subordinate
- Last Quarter Forecast versus Order Revenue by Subordinate

Currency Conversion

In order to facilitate real-time analysis, Siebel Sales Analytics provides for currency conversion for all data from the relational database. This allows users to see all metrics in a single currency, and facilitating meaningful aggregation and comparison of all revenue-based metrics. The system converts all currencies into the default currency used by the Siebel Data Warehouse, so that data from the relational database can be meaningfully compared to data coming from the data warehouse.

NOTE: The system administrator must work with the business analysts to determine the appropriate currency conversion.

Accurate currency conversion requires that the currency to be converted have two attributes:

- A currency code that represents its current currency
- A conversion date that represents the date for which the currency is to be converted

Any revenue information that lacks one of these attributes will be converted using ETL Unknown Exchange Rate. In the standard product, this Initialization Block variable is defined as 1, meaning that unknown currencies are not converted. It is recommended that you use 1 or 0 for this variable so that currencies with unknown current currencies or conversion dates are not converted (ETL Unknown Exchange Rate = 1) or are ignored (ETL Unknown Exchange Rate = 0).

Performance

Siebel Sales Analytics uses the Siebel transactional database to provide real-time analytics capabilities. System performance must be carefully managed by using the various caching capabilities of both the Web Server and the Siebel Analytics Server and by using the optimization capabilities of their databases. Read *Siebel Analytics Performance Tuning Guide* before deploying Siebel Sales Analytics.

In addition to the performance tuning steps described, you can do two things to improve the overall performance of the Forecasting subject area:

- Archive forecasts in the data warehouse consistently.

For instance, you archive each forecast one week after completion. By storing more forecasts in the data warehouse, you simultaneously improve the performance of the analytics queries and reduce the burden on the relational database.

The Initialization Block variable `ETLRunDateMinusInterval` controls which forecasts are sought in the relational database and which forecasts are sought in the data warehouse. This variable looks for forecasts with dates that are some interval before the last ETL run date. For instance, if each forecast is stored one week after completion and an ETL is run each week, then it is guaranteed that any forecast two or more weeks old will be in the data warehouse, so the `ETLRunDateMinusInterval` should be set to `ETLRunDate - 14 (days)`.

The Siebel Analytics Server looks in the data warehouse only for those forecasts that are actually there, so care must be taken in determining this variable.

- Use the single currency forecast.

By preconverting the forecast data into the data warehouse default currency, you remove the necessity for all forecast data to be currency-converted. This allows you to remove the joins and SQL required in the forecast metadata for currency conversion, thereby improving performance. See the *Siebel Forecasting Guide* for detailed instructions on how to establish and maintain single currency forecasts.

Workforce Analytics

Siebel Employee Relationship Management (ERM) provides Analytics for Workforce Training, Workforce Performance, and HelpDesk. This section describes some of the configuration that may be necessary for Workforce Analytics. For further information on Siebel ERM, see *Siebel Employee Relationship Management Administration Guide*.

Siebel Industry Applications Analytics Metadata **11**

Siebel Industry Applications Analytics serve the following industries: Communications, Media, and Energy (CME), Consumer Sector, Life Sciences, Automotive, Financial Services, and Homeland Security.

Siebel Industry Applications are shipped with certain Siebel Analytics metadata. This chapter covers the Siebel Analytics metadata for Siebel Industry Applications, especially those areas for which a Siebel administrator may need to adjust Siebel Analytics or the Siebel operational application for specific Analytics purposes, specifically in the areas of:

- Dashboard content of Siebel Industry Applications Analytics
- Metadata requirements for Siebel Industry Applications Analytics

NOTE: With this release, you will be able to license one or more Siebel Industry Applications Analytics. This allows you to access only those dashboards, subject areas, and reports that you want.

Disabling the eFinance Logical Table Sources

Before using any Siebel Industry Applications *other than* Siebel Finance Analytics, Siebel Healthcare Analytics, or Siebel Insurance Analytics objects, you must update the Logical Table sources in the Siebel Analytics Repository file.

These Logical sources must be deactivated in order for your Siebel Industry Applications Analytics reports to point to the right logical model and retrieve the correct data. Do this by deactivating the W_ASSET_F (FINS) source for the logical table FACTS in the core subject area.

To update Logical Table sources for Siebel Industry Applications

- 1** Shut down Siebel Analytics Server.
- 2** Launch Siebel Analytics Server Administration Tool and open Siebel Analytics Repository (SiebelAnalytics.rpd).
- 3** Go to the Business Model and Mapping window (the logical layer window) and double-click Core to open it.
- 4** Scroll down to the FACTS logical table and double-click the Sources folder to open it.
- 5** Scroll down to W_ASSET_F (FINS) in the list of logical table sources, right-click on it and select Properties.
- 6** Click the General tab in the Properties window and uncheck the Active check box.
- 7** Click on OK, save the repository and restart Siebel Analytics Server.

Metadata Requirements for Siebel eFinance Analytics Applications

This section covers data setup that needs to be done properly in the Siebel transactional database for it to be displayed accurately in Siebel Analytics.

Updating Siebel eFinance Analytics Logical Table Sources

Before using Siebel eFinance Analytics, Siebel eHealthcare Analytics, and Siebel eInsurance Analytics objects, you must update the Logical Table sources in the Siebel Analytics Repository file. These Logical sources must be deactivated in order for Siebel eFinance Analytics, Siebel eHealthcare Analytics, and Siebel eInsurance Analytics reports to point to the right logical model and retrieve the correct data. Do this by deactivating the W_ASSET_F source for the logical table FACTS in the core subject area.

To update Logical Table sources for eFinance Analytics

- 1** Shut down Siebel Analytics Server.
- 2** Launch Siebel Analytics Administration Tool and open Siebel Analytics Repository (SiebelAnalytics.rpd).
- 3** Go to Business Model and Mapping window (the logical layer window) and double-click Core to open it.
- 4** Scroll down to the FACTS logical table and double-click the Sources folder to open it.
- 5** Scroll down to W_ASSET_F in the list of logical table sources, right-click on it and select Properties.
- 6** Click the General tab in the Properties window and uncheck the Active check box.
- 7** Click on OK, save the repository, and restart Siebel Analytics Server.

Externalizing Financial Services Metadata Translation Strings

The Financial Services applications use a different set of translation strings from other Siebel eBusiness applications.

NOTE: See also the section [“About Siebel Operational Application Metadata Import Files” on page 154.](#)

You must externalize the metadata strings in the Analytics repository.

To externalize metadata strings in the Analytics repository

- 1** Open the SiebelAnalytics.rpd using the Analytics Administration Tool.
- 2** Select the entire presentation layer and right-click the mouse to display the menu.
- 3** Choose Externalized Metadata Strings.

With this configuration, all metadata strings are read from an external Siebel operational application database, specifically from the table S_MSG.

- 4** Make sure that the connection pool Externalized Metadata Strings points to the Siebel operational application database and is working correctly.
- 5** Go to the Manage Variables menu and locate the initialization block External Metadata Strings.
- 6** Double-click on the initialization block to open the Edit window.
- 7** In the Initialization SQL area, change the SQL:

from

```
select MSG_NUM, MSG_TEXT
from VALUEOF(TBO).S_MSG
where MSG_TYPE = 'Metadata' and
LANG_ID = decode( 'VALUEOF(NQ_SESSION.LOCALE)' ... [more]
```

to

```
select MSG_NUM, MSG_TEXT
from VALUEOF(TBO).S_MSG
where MSG_TYPE = 'FINS_Metadata' and
LANG_ID = decode( 'VALUEOF(NQ_SESSION.LOCALE)' ... [more]
```

- 8** Click OK to commit the changes and save the repository.
- 9** Restart the Siebel Analytics Server.

Metadata Requirements for Siebel Consumer Sector Analytics Applications

This section covers data setup that needs to be done properly in the Siebel transactional database for it to be displayed accurately in Siebel Analytics.

Siebel eConsumer Goods Sales Analytics extends the base Sales Analytics application to include Trade Funds Management analytics, Trade Promotion Evaluation analytics, Sales Performance analytics, and Retail Audit analytics.

All Consumer Goods specific metadata has been added to a single subject area. In the Server Administration Tool, this metadata is tagged with a red apple icon. The following section covers each fundamental area of Consumer Goods analytics and provides tips for data entry for effective analytics.

The Consumer Goods dashboards and pages available to the end user are described in [Table 30](#).

Table 30. Consumer Goods Dashboards and Page Tabs

| Dashboard | Page | Function |
|------------------|-------------------|--|
| Retail Audit | Last Audit | Shows the aggregated results of the last audit, defined the last time a product was audited at a specific account and merchandising location. The aggregated metrics can be drilled into to get a list of accounts or products to target future efforts. |
| | Trends | Displays key metrics captured in a retail audit over time across accounts or product categories. |
| | Position | Combines account and product performance with the individual representative responsible. |
| Promotion | Plan Year To Date | Displays both individual promotional performance with cumulative trends to provide overall perspective on meeting promotional targets. |
| | Key Accounts | Shows post promotion evaluation from a key account perspective across several levels of detail including plan, promotion, or promoted product detail. |
| | Corporate | Shows post promotion evaluation from a brand managers perspective, by evaluating corporate promotions. |
| Funds | Summary | Displays the key analyses for a fund manager, including Remaining Amounts which provides a status of all funds relative to all other funds. |
| | Accounts | Highlights status of funds and funds spent at a specific account and is targeted to assist key account managers in determining how to fund future promotions. |

Table 30. Consumer Goods Dashboards and Page Tabs

| Dashboard | Page | Function |
|-------------------|-----------------------|--|
| Sales Performance | Sales Volume Planning | Details the key metrics used in sales volume planning, including incremental, target, shipment and consumption volumes, over time and in comparison to one another. Baseline and estimated incremental volumes are stacked and compared to targets to assist in identifying future progress against targets. This analysis uses a global filter to assist end users in getting to the level of details they want in one selection. |
| | Hierarchy | Similar in content to Sales Volume Planning, however, this analysis is organized to promote exploration of data, allowing end users to freely drill up or down the account, time, or category product hierarchies. This page should be used to help sales managers identify where sales exceeded expectations. |
| | Trends | Depicts sales trends across accounts, channels, and categories as well as compares account performance in order to rank them. |
| | Growth | Displays key sales metrics versus the year ago and charts the rate of growth. |
| VP Sales | Business Overview | This page focuses on answering key business questions of a sales executive including where are my sales? How effective are my promotions by channel? Which account plans are top and bottom performers? How is my promoted volumes and funds spend trending as compared to last year? what are my top 5 accounts in each category? |
| | Product Overview | This page focuses on answering key product questions of a sales executive including what percentage of total sales is in each category? What products are selling where by whom? |

Table 30. Consumer Goods Dashboards and Page Tabs

| Dashboard | Page | Function |
|---------------------|----------|---|
| Key Account Manager | Account | This page focuses on answering key business questions of a key account manager including how I am performing versus my account plan? What is my promotional forecast accuracy? What funds are available to plan additional retail activity? |
| | Category | This page focuses on answering key product questions of a key account manager including which category is best promoted at my accounts? How are my store conditions trending? Are out of stocks preventing me from reaching my targets? |

The data requirements for the Consumer Goods–specific portion of the data model are detailed in [Table 31](#). This includes the fund, promotion, performance and retail audit schema.

Table 31. Data Requirements for Consumer Goods Schema

| Page | Function |
|-----------|--|
| Funds | Trade Fund Management analytics incorporates the latest Trade fund functionality including aggregation of approved adjustments, transfers, deal allocations, and payments at all statuses. |
| Promotion | In the transactional database, fund allocations and product movement (incremental volumes) can be assigned to a promotion at the promotion or the promoted product level. The ETL transfers this information at the promoted product level only. If you allocate funds at the promotion level and assign product detail such as shipment quantities at the promoted product level, the fund allocation data will need to be pushed to the promoted product level to be accurately stored in the Siebel Data Warehouse. |

Table 31. Data Requirements for Consumer Goods Schema

| Page | Function |
|--------------|--|
| Performance | <p>Sales Performance analytics is used primarily in conjunction with the category product hierarchy as defined by Siebel Sales Volume Planning. To create the category-product hierarchy, the SVP adopt flag must be selected in order to aggregate product data up the category product hierarchy. This flag can be found by navigating to Catalog Administration > SVP Category Details View > Products applet.</p> <p>The data warehouse and all prebuilt analyses are built from the end date of a period. To make sure data is accurate, the periods in the Siebel transactional database tables must be of a single duration. If they are different, inaccurate data could be stored in the data warehouse. For example, if a week and a month end on the same date, the actual shipped quantities will be combined during the building of the data warehouse.</p> |
| Retail Audit | <p>The Last Audit Flag is set during the ETL process. The flag is set to Yes for the most recent record for a product at an account and merchandising location. All other audit records for that combination of product, account, and merchandising location are set to No.</p> <p>The observation date is used to sort the retail audit records to determine which is the last audit. The observation date is populated when the status of a retail audit activity is changed to Done. The field observation date does not show up in the Siebel transactional database user interface and does not have to be the same as the activity date.</p> |

Metadata Requirements for Siebel CME Analytics Applications

This section covers data setup that needs to be done properly in the Siebel transactional database for it to be displayed accurately in Siebel Analytics.

Communications, Media and Energy (CME) industry-specific analytics dashboards and pages are shown in [Table 32](#).

Table 32. Communications, Media and Energy Dashboards and Page Tabs

| Dashboard | Page | Function |
|--------------------|-------------------------|--|
| Loyalty Management | Customer Lifetime Value | Segments customers based upon defined ranges of scores predicting customer lifetime value. |
| | Churn Propensity | Segments customers based on defined ranges of scores estimating churn propensity. |
| | Selling Propensity | Segments customers based on defined ranges of scores valuing the potential of up-sell and cross-sell opportunities. |
| | Financial Risk | Segments customers based on defined ranges of scores predicting financial risk. |
| | Actual Churn | Shows trending of actual customer churn, and actual customer acquisition, over time. |
| Revenue Management | Revenue Trends | Charts trends of order revenue and order volume over time, and identifies top products based on order revenue and volume. |
| | Service Activations | Charts trends of service activations over time, and indicates top service activations based on order revenue and volume. |
| | Service Modifications | Charts trends of service modifications over time, and indicates top service modifications based on order revenue and volume. |
| | Service Disconnections | Charts trends of service disconnections over time, and identifies services with the highest disconnection volume. |

Table 32. Communications, Media and Energy Dashboards and Page Tabs

| Dashboard | Page | Function |
|--------------------|------------------------|---|
| Account Management | Sales Portal | Identifies top accounts, and related top products, based upon order revenue and order volume. |
| | Service Activations | Charts trends of account service activations, and indicates top accounts based on service activation performance metrics. |
| | Service Modifications | Charts trends of account service modifications, and indicates top accounts based on service modification performance metrics. |
| | Service Disconnections | Charts trends of account service disconnections, and identifies accounts with the highest volume of disconnections. |
| | Trouble Tickets | Provides trouble ticket trending charts, and performance indicators, for particular accounts, and for accounts with selected common characteristics. |
| | Customer Satisfaction | Provides customer satisfaction trending charts, and performance indicators, for particular accounts, and for accounts with selected common characteristics. |

To support these industry-specific dashboards, Communications, Media and Energy (CME) Analytics contains corresponding industry-specific metadata. In the Siebel Analytics Server Administration Tool, industry-specific metadata is flagged with an icon picturing a telephone. Although this icon is visible in the Server Administration Tool, it is neither visible nor included within Siebel Answers. End users employ Siebel Answers to access metadata for building queries and reports. For users of Siebel Answers to view and access CME metadata columns, they must log in to Siebel using one of the CME responsibilities listed in [Table 27 on page 220](#). These responsibilities also determine what subject areas the user may access.

The data requirements for each of the Communications, Media and Energy dashboards are detailed in [Table 33](#).

Table 33. Data Requirements for Communications, Media and Energy Dashboards

| Dashboard | Function |
|--------------------|--|
| Loyalty Management | This dashboard uses customer scores generated from any third-party predictive modeling application offering the following predictive models: Customer Lifetime Value, Churn Propensity, Up-Sell Propensity, Cross-Sell Propensity, and Financial Risk Propensity. Scores must be generated for each Siebel Account, integrated into the Siebel Transaction Database, and then written to the Siebel Data Warehouse. This dashboard uses the Siebel Analytics Customers subject area. See “About Predictive Analytics Metadata” on page 254 for more information. |
| Revenue Management | This dashboard uses data generated by Siebel Communications, Media and Energy order management and interactive selling functionality. No specific data requirements are required beyond the data generated from these Siebel modules. This dashboard uses the Siebel Analytics Orders and Products subject areas. |
| Account Management | This dashboard uses data generated by Siebel Communications, Media and Energy order management, interactive selling, and service functionality. No specific data requirements are required beyond the data generated from these Siebel modules. This dashboard uses the Siebel Analytics Orders, Products, Service Request and Customer Satisfaction subject areas. |

About Predictive Analytics Metadata

The Loyalty Management Dashboard and several Siebel Analytics subject areas use customer scores generated from a third-party predictive modeling application. A predictive modeling application uses mathematical models to predict customer behavior. For customer scoring to be made available for analysis in Siebel Analytics, CME metadata is provided which maps these customer scores to dashboards and subject areas. Relevant predictive scores available include:

- Churn Score
- Customer Value Score
- Upsell Score

- Cross-Sell Score
- Financial Risk Score

To facilitate customer segmentation in Siebel Analytics, the following metadata fields group these scores into score ranges:

- Churn Score Range
- Customer Value Score Range
- Upsell Score Range
- Cross-Sell Score Range
- Financial Risk Score Range

While the majority of Predictive Analytics metadata resides in the Customers subject area, some of it resides in other subject areas as well.

Developing and Deploying Predictive Scores

The process of developing and deploying these predictive scores is described in the following procedure.

To develop and deploy predictive scores

- 1** Generate predictive scores using any third-party predictive modeling application. This is performed outside of the Siebel operational application.
- 2** Integrate the scores into the Siebel transactional database. Once this is completed, scores may be viewed in the Siebel operational application by accessing the Accounts > Profiles > Loyalty Profile view.
- 3** Load the integrated scores into the Siebel Data Warehouse during the extraction, transformation, and loading (ETL) process.
- 4** Once these scores are loaded into the Siebel Data Warehouse, they are mapped to the following Siebel Analytics metadata fields:
 - Churn Score
 - Customer Lifetime Value Score

- Upsell Score
- Cross-Sell Score
- Financial Risk Score

In conjunction with other associated metadata, these fields are primarily used to populate the Loyalty Management dashboard.

About Order Management Analytics

Siebel Communications, Media and Energy (CME) makes use of order management functionality configured for CME. For Siebel CME Analytics to fully reflect the information collected by CME order management functionality, some extensions to the Siebel CME Analytics application may be required. This section explains these potential extensions.

NOTE: For more information, see release notes documentation for Siebel Communication, Media and Energy Analytics, and Siebel Interactive Selling Suite Analytics.

Siebel Sales Orders include complex products and simple products.

Complex products are comprised of a series of products, related by a product hierarchy. The highest product in the hierarchy is the root product, and the lower level products are the child products. In complex products, revenue figures are summed and roll up to the root product using the ROLLUP_NET_PRI field. For a complex product, Siebel Analytics examines only the root product when computing revenue. Child products are disregarded because their revenue is already reflected in the root.

Simple products by nature include only a root product. Siebel Analytics examines this root product when computing revenue, and nothing more.

Siebel Communications, Media and Energy order management functionality supports products which have recurring charges over time (for example, \$20 per month for 12 months), one-time charges (for example, one-time purchase price of equipment), and usage charges (for example, 15 cents per minute).

The revenue attributed to a product with recurring charges is valued by taking the product's net price and multiplying it by the number of months that product is anticipated to be active, as represented by the Number of Revenue Occurrences field. This field, contained in Quote Item and Order Item records, is contained in the Siebel Data Warehouse by the following fields:

- W_QUOTEITEM.F.NUM_OCCURRENCE
- W_ORDERITEM.F.NUM_OCCURRENCE

In Siebel CME Analytics, revenue metrics do not automatically account for all recurring charges, and do not consider the NUM_OCCURRENCE fields. Instead, Siebel CME Analytics revenue metrics incorporate one-time charges, one-month's worth of recurring charges, and no usage charges. To incorporate the anticipated value of all recurring charges, the W_QUOTEITEM.F.NUM_OCCURRENCE and W_ORDERITEM.F.NUM_OCCURRENCE fields may need to be incorporated into revenue calculations made during the Extraction, Transformation and Load (ETL) process for order item and line item records.

Alternatively, these fields in the Siebel transactional database, representing the aggregated recurring and one-time product charges, may be used and incorporated into the ETL processes:

- S_ORDERITEM.PER_MTH_CHG_SUBTOT
- S_ORDERITEM.ONETIME_CHG_SUBTOT
- S_QUOTEITEM.PER_MTH_CHG_SUBTOT
- S_QUOTEITEM.ONETIME_CHG_SUBTOT

Each CME Order line item and Quote line item contains an Action Type of Add, Update, or Delete. Because Siebel Analytics only looks at root product line items, only the Action Types associated with the root product will be considered during analysis. Therefore, while all line items for a complex product may collectively include a combination of various Action Types, only the Action Type for the root product will be considered during analysis. This is of special importance if a filter or query criteria in analysis is based on the Action Type field, which it is for most Account Management and Revenue Management dashboard reports.

Similarly, each CME Order line item and Quote line item is associated with a product of a particular Price Type. Because Siebel Analytics considers root products only, only the Price Type associated with the root product is considered during analysis. Again, this is important if a filter or query criteria is based on Price Type. Such filter criteria apply to most Account Management and Revenue Management dashboard reports.

Metadata Requirements for Siebel Life Sciences Analytics Applications

This section covers these topics:

- [“Configuring Dimensions Common to All Subject Areas” on page 259](#)
- [“Configuring Dimensions Specific to Life Sciences Subject Areas” on page 262:](#)
 - [“Pharma Sales Effectiveness” on page 262](#)
 - [“Product Categories” on page 262](#)
 - [“Pharma Promotional Effectiveness” on page 262](#)
 - [“Pharma Medical Education Effectiveness” on page 263](#)
 - [“Pharma Customer Demographics” on page 263](#)
 - [“Pharma Objectives Achievement” on page 264](#)

Configuring Dimensions Common to All Subject Areas

These dimensions are used in all subject areas:

- [“Positions Dimension”](#)
- [“Alignments Dimension” on page 260](#)
- [“Products Dimension” on page 261](#)
- [“Product Costs Dimension” on page 261](#)

Positions Dimension

A sales territory is defined in Group Administration–Positions by a Siebel position. Creating parent positions creates the sales force hierarchy. Up to 10 levels of sales force hierarchy are supported by the application. Employees should be assigned to positions to populate employee hierarchy.

Position Types need to be set up according to compensation type (Rx or sales) only at the sales territory level. A district manager does not need to have a Position Type assigned to it. Sales Allocation needs to be exposed on the list applet to enter script compensation percentages (Rx or Sales) associated with each territory. For example, if all sales representatives receive 100% of the Rx on a ZIP Code, no action is needed or Position Type = Sales Representative can be assigned to the position.

Seed data on the Position Type list of values has been enhanced to include types for mirror, job share, and swat. Typically, both mirror and job share represent a position that receives less than 100% of the total scripts on a ZIP Code.

Alignments Dimension

A sales territory alignment is the relationship of ZIP Code-to-territory or brick-to-territory. The alignment relationship is created in Siebel Assignment Manager under Assignment Administration-Territories, as shown in [Table 34](#).

Table 34. Sales Territory Alignment

| Relationship | Criteria | Comments |
|----------------------------|------------------|---|
| Contact ZIP to Territory | Contact ZIP Code | Use contact primary address ZIP Codes. Do not use ranges of ZIP Codes (that is, enter unique ZIP Codes as low and high values). Do not enter duplicate ZIP Codes. |
| Account ZIP to Territory | Account ZIP Code | Do not use ranges of ZIP Codes (that is, enter unique ZIP Codes as low and high values). Do not enter duplicate ZIP Codes. |
| Contact Brick to Territory | Contact Brick | Use contact primary address brick. Do not use ranges of bricks (that is, enter unique bricks as low and high values). Do not enter duplicate ZIP Codes. |
| Account Brick to Territory | Account Brick | Do not use ranges of bricks (that is, enter unique bricks as low and high values). Do not enter duplicate ZIP Codes. |
| Account to Territory | Account | Do not enter duplicate accounts. |
| Contact to Territory | Contact | Do not enter duplicate contacts. |

Products Dimension

The product hierarchy requires customer products (products of the company who licensed the software) to have predefined product types as shown in [Table 35](#).

Table 35. Customer Products Predefined Product Types

| Product Level | Product Type | Example |
|---------------|--------------|---------------|
| 3 | Sample | Aracid 400 MG |
| 2 | Detail | Aracid |
| No Level | Sub Market | COPD |
| 1 | Market | Asthma |

NOTE: Competitive products should use the product type Competitor. Competitor product hierarchies are set up using parent product relationships exclusively and should not have product levels assigned to them.

Product Costs Dimension

Product costs for customer products (that is, products of the company that licensed the software) require population in the Product Administration, Product Form Applet, as shown in [Table 36](#).

Table 36. Product Costs For Customer Products

| Product Type | Field to be Populated |
|-----------------------|-----------------------|
| Sample | Sample Cost |
| Detail | Avg. Promo Cost |
| Promotional Item Cost | Sample Cost |

Configuring Dimensions Specific to Life Sciences Subject Areas

This section discusses the subject areas used by Pharma Analytics.

Pharma Sales Effectiveness

This subject area is focused on syndicated data analytics.

The specific configuration required for the S_SYND_DATA table depends on your data types, and the Analytics application and reports that you have licensed. The Data Loading Matrix table in *Siebel Data Warehouse Installation and Administration Guide* is the basis of prebuilt reports. The syndicated data loading matrix populates both base and derived metrics used in pharmaceutical sales analytics.

Product Categories

Siebel Pharma Analytics supports custom and prebuilt product category trees to allow rollup of syndicated data by alternative hierarchies. To populate a custom category, first create a Catalog in Catalogue Administration, and create categories and subcategories as part of the catalogue. [Table 37](#) lists the categories that need to have the Usage Type field populated in the Catalog Admin Category Detail Applet.

Table 37. Hierarchy Categories to be Populated in Pharma Analytics

| Usage Type Code | Hierarchy Category |
|------------------|---|
| ATC | Anatomical Therapeutic Class |
| Chemical | Chemical |
| Application Form | Product application |
| USC | User-defined codes and custom hierarchies |

Pharma Promotional Effectiveness

This subject area combines call activity data with syndicated data to analyze effectiveness of call activity.

Call Activity analysis records are derived from submitted call activity records stored in S_EVT_ACT in the Siebel transactional database, where they are stamped with the ZIP Code or brick where the activity took place—that is, the Contact primary address's ZIP code/brick or the Account ZIP Code/brick. Allocation of these ZIP Code/brick records should be done by Assignment Manager rules to make sure that they are correctly allocated. Assignment Manager rules must match the Contact or Account primary address ZIP Codes or bricks. Otherwise, data integrity is not maintained.

Only calls that have status Submitted on the Pharma Professional Call Form Applet are brought over from the Siebel transactional database to the Siebel Data Warehouse.

Pharma Medical Education Effectiveness

This subject area combines measures from MedEd and Syndicated Data to measure effectiveness of medical education events used on medical education analytics.

Only MedEd events with the status Completed on the Pharma ME Event List Applet are extracted from Siebel transactional database to populate the Siebel Data Warehouse.

MedEd Event costs are based on costs of activities in the Pharma ME Event Activity List Applet. Costs are allocated based on MedEd Team cost allocation, and promoted products Cost Allocation on the MedEd event.

Costs are solely based on physician invitees with the status Attended in the Pharma ME Event Professional Invitee Session List Applet.

Control groups are based on physicians who have the same contact ranking as attendee physicians within the same sales territory at the time of the event, but who did not attend the event.

Pharma Customer Demographics

This subject area supplies denormalized tables for contact and account profiling. It is typically loaded from external sources and contains the master contact list. Prebuilt ETL extracts the contact list from Siebel.

Pharma Objectives Achievement

This subject is used to measure achievement and results for pharma call activity and Rx/sales targets. It is based on Pharma Objectives.

Objectives need to have a Unit populated in Retail Objective Form Applet. Actual target numbers per contact and account need to be populated in the Pharma Campaign Target Account List Applet or the Pharma Campaign Target Professional List Toggle Applet.

The Siebel Analytics Server software uses an initialization file to set parameters upon startup. This initialization file, the NQSConfig.INI file, includes parameters to customize behavior based on the requirements of each individual installation. This chapter provides the rules for using the file, shows a sample file, and provides definitions and syntax for each parameter. The following sections are included:

- “[Siebel Analytics Initialization File Parsing Rules](#)” on page 265
- “[Sample Configuration Initialization File](#)” on page 266
- “[Configuration File Parameters and Syntax](#)” on page 274

NOTE: For information about the clustering configuration file, see [Appendix B, “NQClusterConfig.INI File Reference.”](#)

Siebel Analytics Initialization File Parsing Rules

The Siebel Analytics Server reads the initialization file each time it is started. If it detects a syntax error while loading, it logs the error to the NQServer.log file, located in the Log subdirectory in the Siebel Analytics software installation directory. There may also be a summary message in the system log relating to the error. You need to correct the error and start the Siebel Analytics Server again. Repeat this process until the server starts with no errors.

Location of Siebel Analytics Initialization File

The initialization file is the NQSConfig.INI file. It resides in the Config subdirectory in the Siebel Analytics software installation directory. Do not change the name of the file or its location.

Adding Comments to the Configuration File

You can add comments anywhere in the NQSConfig.INI file. Comments need to begin with either of the following:

- #
- //

Any text following these comment characters up to the end of the line is ignored when the Siebel Analytics Server reads the initialization file.

Rules for Configuration File Parameter Entries

Note the following about each parameter entry in the NQSConfig.INI file:

- Entries need to be within the section to which the parameter belongs (Repository, Cache, General, and so on).
- Each entry needs to be terminated with semi-colon (;).
- Any syntax errors will prevent the Siebel Analytics Server from starting up. The errors are logged to the NQServer.log file.

Changing Configuration File Parameter Entries

Parameter entries are read when the Siebel Analytics Server starts up. If you change an entry when the server is running, you need to shut down and then restart the server for the change to take effect.

Sample Configuration Initialization File

The following is a sample NQSConfig.INI file. The NQSConfig.INI file is located in the Config subdirectory in the Siebel Analytics software installation directory. For detailed explanations of the parameters, see [“Configuration File Parameters and Syntax” on page 274](#). This sample shows the file as it appears in the Windows environment. All parameter explanations are targeted towards the Windows environment.

```
#####
#
# NQSConfig.INI
#
# Copyright (c) 1997 - 2003 Siebel Systems, Inc.
#
# INI file parser rules are:
# If values are in literals, digits or _, they can be
# given as such. If values contain characters other than
# literals, digits or _, values must be given in quotes.
#
#####

#####
#
# Repository Section
#
# Repositories are defined as logical repository
# name - file name pairs. ODBC drivers use logical
# repository name defined in this section.
#
# All repositories must reside in
# SiebelAnalytics\Repository directory, where
# SiebelAnalytics is the directory in which the
# Siebel Analytics Server software is installed.
#
#####

[ REPOSITORY ]

Star = siebelanalytics.rpd, DEFAULT;

#####
#
# Cache Section
#
#####

[ CACHE ]

ENABLE =YES;
```

NQSConfig.INI File Reference

Sample Configuration Initialization File

```
// A comma separated list of <directory maxSize> pair(s)
// e.g. DATA_STORAGE_PATHS = "d:\SiebelAnalyticsData\nQSCache"
// 500 MB;

DATA_STORAGE_PATHS = "d:\SiebelAnalyticsData\Temp\Cache" 256 MB;

METADATA_FILE = "d:\SiebelAnalyticsData\Temp\Cache\MetaData";

REPLACE_ALGORITHM = LRU;

BUFFER_POOL_SIZE = 1 MB;

MAX_ROWS_PER_CACHE_ENTRY = 100000; // 0 is unlimited size

MAX_CACHE_ENTRY_SIZE = 1 MB;

MAX_CACHE_ENTRIES = 1000;

POPULATE_AGGREGATE_ROLLUP_HITS = NO;

// 0 indicates that periodic metadata backups are not done
METADATA_BACKUP_FREQUENCY_MINUTES = 1440; // 24 Hours

#####
#
# General Section
#
# Contains general server default parameters, including
# localization and internationalization, temporary space
# and memory allocation, and other default parameters
# used to determine how data is returned from the Siebel
# Analytics Server to a client.
#
#####

[ GENERAL ]

// Localization/Internationalization parameters.

LOCALE = "English-usa";

SORT_ORDER_LOCALE = "english-usa";
```

```
SORT_TYPE = "binary";

// Case sensitivity should be set to match the remote
// target database.

CASE_SENSITIVE_CHARACTER_COMPARISON = OFF ;

// SQLServer65 sorts nulls first, whereas Oracle sorts
// nulls last. This ini file property should conform to
// that of the remote target database, if there is a
// single remote database. Otherwise, choose the order
// that matches the predominant database (i.e. on the
// basis of data volume, frequency of access, sort
// performance, network bandwidth).

NULL_VALUES_SORT_FIRST = OFF;

DATE_TIME_DISPLAY_FORMAT = "yyyy/mm/dd hh:mi:ss" ;

DATE_DISPLAY_FORMAT = "yyyy/mm/dd" ;

TIME_DISPLAY_FORMAT = "hh:mi:ss" ;

// Temporary space, memory, and resource allocation
// parameters.
// You may use KB, MB for memory size.

WORK_DIRECTORY_PATHS = "d:\SiebelAnalyticsData\Temp";

SORT_MEMORY_SIZE = 4 MB ;

SORT_BUFFER_INCREMENT_SIZE = 256 KB ;

VIRTUAL_TABLE_PAGE_SIZE = 128 KB ;

// Analytics Server will return all month and day names as three
// letter abbreviations (e.g., "Jan", "Feb", "Sat", "Sun").
// To use complete names, set the following values to YES.

USE_LONG_MONTH_NAMES = NO;

USE_LONG_DAY_NAMES = NO;
```

NQSConfig.INI File Reference

Sample Configuration Initialization File

```
UPPERCASE_USERNAME_FOR_INITBLOCK =YES;

#####
#
# Security Section
#
# Legal value for DEFAULT_PRIVILEGES are:
# NONE READ
#
#####

[ SECURITY ]

DEFAULT_PRIVILEGES = READ;

PERFORM_OS_AUTHENTICATION = YES;

PROJECT_INACCESSIBLE_COLUMN_AS_NULL =YES;

MINIMUM_PASSWORD_LENGTH = 0;

# There are 3 types of authentication. The default is NQS
# You can select only one of them
#
#----- 1 -----
#AUTHENTICATION_TYPE = NQS; // optional and default

#
#----- 2 -----
#AUTHENTICATION_TYPE = DATABASE;

# [ DATABASE ]
# DATABASE = "some_data_base";

#
#----- 3 -----
#AUTHENTICATION_TYPE = BYPASS_NQS;
```

```
#####
#
#  Server Section
#
#####

[ SERVER ]

SERVER_NAME = Siebel_Analytics_Server ;

SESSION_TIME_OUT_SECONDS = 300 ;

MAX_SESSION_LIMIT = 2000 ;

MAX_REQUEST_PER_SESSION_LIMIT = 500 ;

SERVER_THREAD_RANGE = 40-100;

SERVER_THREAD_STACK_SIZE = 0; // default is 1 MB, 0 for default
DB_GATEWAY_THREAD_STACK_SIZE = 0; // default is 256 KB, 0 for default
MAX_EXPANDED_SUBQUERY_PREDICATES = 8192; // default is 8192
MAX_QUERY_PLAN_CACHE_ENTRIES = 1024; // default is 1024
MAX_DRILLDOWN_INFO_CACHE_ENTRIES = 1024; // default is 1024
MAX_DRILLDOWN_QUERY_CACHE_ENTRIES = 1024; // default is 1024
INIT_BLOCK_CACHE_ENTRIES = 20; // default is 20

CLIENT_MGMT_THREADS_MAX = 5; // default is 5
RPC_SERVICE_OR_PORT = 9703; // default is 9703

ENABLE_DB_HINTS = YES; // default is yes
PREVENT_DIVIDE_BY_ZERO = YES;

CLUSTER_PARTICIPANT = NO;

// Following required if CLUSTER_PARTICIPANT = YES
#REPOSITORY_PUBLISHING_DIRECTORY = "<dirname>";
```

```
#REQUIRE_PUBLISHING_DIRECTORY = YES; // Don't join cluster if
directory not accessible

DISCONNECTED = NO;

AUTOMATIC_RESTART = YES;

#####
#
# Dynamic Library Section
#
# The dynamic libraries specified in this section
# are categorized by the CLI they support.
#
#####

[ DB_DYNAMIC_LIBRARY ]

ODBC200 = nqsdbgatewayodbc;
ODBC350 = nqsdbgatewayodbc35;
OCI7 = nqsdbgatewayoci7;
OCI8 = nqsdbgatewayoci8;
OCI8i = nqsdbgatewayoci8i;
DB2CLI = nqsdbgatewaydb2cli;
DB2CLI35 = nqsdbgatewaydb2cli35;
NQSXML = nqsdbgatewayxml;
XMLA = nqsdbgatewayxmla;

#####
#
# User Log Section
#
# The user log NQQuery.log is kept in the SiebelAnalytics\log
# directory. It logs activity about queries when enabled
# for a user. Entries can be viewed using a text editor
# or the nQLogViewer executable.
```

```

#
#####

[ USER_LOG ]

USER_LOG_FILE_SIZE = 10 MB; // default size
CODE_PAGE = "UTF8"; // ANSI, UTF8, 1252, etc.

#####
#
# Usage Tracking Section
#
# Collect usage statistics on each logical query
# submitted to the Siebel Analytics Server.
#
#####

[ ACCOUNTING ]

ENABLE = NO;

//=====
// Parameters used for writing data to a flat file
// (i.e. DIRECT_INSERT = NO).

STORAGE_DIRECTORY = "<full directory path>";

CHECKPOINT_INTERVAL_MINUTES = 5;

FILE_ROLLOVER_INTERVAL_MINUTES = 30;

CODE_PAGE = "ANSI"; // ANSI, UTF8, 1252, etc.
//

//=====

DIRECT_INSERT = NO;

//=====

```

```
// Parameters used for inserting data into a table (i.e.
DIRECT_INSERT = YES).

//

PHYSICAL_TABLE_NAME = "<Database>". "<Catalog>". "<Schema>". "<Table>"
;

CONNECTION_POOL = "<Database>". "<Connection Pool>" ;

BUFFER_SIZE = 1 MB ;

BUFFER_TIME_LIMIT_SECONDS = 5 ;

NUM_INSERT_THREADS = 5 ;

MAX_INSERTS_PER_TRANSACTION = 1 ;

//
//
=====

#####
#
# Query Optimization Flags
#
#####

[ OPTIMIZATION_FLAGS ]

STRONG_DATETIME_TYPE_CHECKING = ON ;
```

Configuration File Parameters and Syntax

This section lists the NQSConfig.INI file parameters and gives a brief description and any required syntax for each parameter. The parameters are listed in the order they appear in the configuration file.

Parameters in the Configuration File–Repository Section

The Repository section contains one entry for every repository that is loaded when the server starts up.

Syntax: `<logical_name> = <repository_name.rpd> ;`

Optional syntax: `<logical_name> = <repository_name.rpd> , DEFAULT ;`

where:

logical_name A logical name for the repositories. Client tools use this name to configure the ODBC data sources that connect to the repository. If you want to use a reserved keyword, such as OCI7 or OCI8, for the name, enclose it in single quotes.

repository_name.rpd The file name of the repository. The file name needs to have the .rpd file extension, and the file needs to reside in the Repository subdirectory in the Siebel Analytics software installation directory.

When DEFAULT is specified for a repository, connections that do not specify a logical repository name in the DSN connect to the default repository.

Example: `Star = SiebelAnalytics.rpd ;`

Parameters in the Configuration File–Cache Section

The parameters in the Cache section provide configuration information for Siebel Analytics Server caching. For information about caching, refer to the chapter on query caching in *Siebel Analytics Server Administration Guide*.

ENABLE

Specifies whether the cache system is enabled. When set to NO, caching is disabled. When set to YES, caching is enabled.

Example: `ENABLE = NO ;`

DATA_STORAGE_PATHS

Specifies the directory paths for where the cached data is stored and the maximum capacity in bytes, kilobytes, megabytes or gigabytes. Each directory listed needs to be an existing, fully-qualified, writable directory pathname, with double quotes (") surrounding the pathname. Specify mapped directories only. UNC path names and network mapped drives are allowed only if the service runs under a qualified user account. To change the account under which the service is running, see [“To change the account under which a Windows service runs” on page 50](#). For optimal performance, the directories specified should be on high performance storage systems.

NOTE: Siebel Analytics Servers defined as Clustered Servers do not share cached data. The DATA_STORAGE_PATHS entry needs to be unique for each server defined as a cluster participant.

Specify multiple directories with a comma separated list. If you specify more than one directory, they should reside on different physical drives. (If you have multiple cache directory paths that all resolve to the same physical disk, both available and used space may be double-counted.)

The maximum storage capacity that you can specify is 4 GB per path. If you specify more than 4 GB, the Analytics Server reduces the actual number to 4 GB at start-up time and issues a warning to the NQServer.log file.

Specify GB for gigabytes, KB for kilobytes, MB for megabytes, and no units for bytes.

Syntax: DATA_STORAGE_PATHS = "<full_directory_path_1>" sz[,
"<full_directory_path_2>" sz{, "<full_directory_path_n>" sz}] ;

Example: DATA_STORAGE_PATHS = "d:\SiebelAnalytics\cache" 100 MB,
"f:\SiebelAnalytics\cache" 2 GB;

NOTE: Specifying more than one directory per drive does not improve performance because file input and output (I/O) takes place through the same I/O controller. In general, specify only one directory per disk drive. Specifying multiple directories on different drives may improve the overall I/O throughput of the Siebel Analytics Server internally by distributing I/O across multiple devices.

METADATA_FILE

Specifies the name of the file that contains information about queries for which data is cached. The filename needs to be a fully qualified pathname with a .dat extension.

NOTE: Siebel Analytics Servers defined as Clustered Servers do not share cached data. The METADATA_FILE entry needs to be unique for each server defined as a cluster participant.

Example: METADATA_FILE = "d:\SiebelAnalytics\metadata_file.dat" ;

REPLACE_ALGORITHM

Specifies the algorithm used to replace existing entries in the cache. Currently, the only supported algorithm supported is LRU (Least Recently Used).

Example: REPLACE_ALGORITHM = LRU ;

BUFFER_POOL_SIZE

Specifies the size of the buffer pool to use to store information from the cache metadata file in memory to improve the cache response time. Specify KB for kilobytes, MB for megabytes, and no units for bytes.

Example: BUFFER_POOL_SIZE = 1 MB ;

MAX_ROWS_PER_CACHE_ENTRY

Specifies the maximum number of rows in a query result set to qualify for storage in the query cache. If the query results have more rows than specified, the results are not stored in the cache. When set to 0, there is no limit to the number of rows per cache entry.

Example: MAX_ROWS_PER_CACHE_ENTRY = 100000 ;

MAX_CACHE_ENTRY_SIZE

Specifies the maximum size for a cache entry. Potential entries that exceed this size will not be cached. The default size is 1 MB. Specify GB for gigabytes, KB for kilobytes, MB for megabytes, and no units for bytes.

Example: MAX_CACHE_ENTRY_SIZE = 1 MB ;

MAX_CACHE_ENTRIES

Specifies the maximum number of cache entries allowed in the query cache. When the limit is reached, old entries are replaced by new entries according to the mechanism specified by the REPLACE_ALGORITHM parameter. The actual limit of cache entries might vary slightly depending on the number of concurrent queries. The default value is 5000.

Example: MAX_CACHE_ENTRIES = 5000 ;

METADATA_BACKUP_FREQUENCY_MINUTES

Specifies the amount of time, in minutes, between each backup of the cache metadata file. When caching is enabled, the cache metadata file is always backed up upon server startup and is backed up again at the interval specified in the parameter. The server automatically uses the backup file after a sudden server shutdown occurs (for example, a power failure or a crash). The backup file is created in the same directory as the cache metadata file and is named the same as the cache metadata file with a .bak extension appended to the name.

When the backup file is used, any entries cached after the backup file was created are automatically purged from the cache. If any entries have been purged or aged out of the cache after the backup file was created, those entries are not recovered. To force the creation of a new cache metadata backup file, cleanly shut down and restart the server as described in the chapter on administering the query environment in *Siebel Analytics Server Administration Guide*.

The default value is 1440 minutes (24 hours). The maximum value is 10080 minutes (7 days). A value of 0 indicates that no periodic backups of the cache metadata file are performed.

Example: METADATA_BACKUP_FREQUENCY_MINUTES = 1440 ;

Parameters in the Configuration File—General Section

The parameters in the General section contains general server default parameters, including localization and internationalization, temporary space and memory allocation, and other default parameters used to determine how data is returned from the Siebel Analytics Server to a client.

NOTE: The settings for the parameters `LOCALE`, `SORT_ORDER_LOCALE`, `SORT_TYPE` and `CASE_SENSITIVE_CHARACTER_COMPARISON`, described as follows, are interrelated. They help determine how the Siebel Analytics Server sorts data.

LOCALE

Specifies the locale in which data is returned from the server. This parameter also determines the localized names of days and months. For example, if the `LOCALE = "greek"`, then names of days and months will be returned from the server in Greek. The localized message strings are written to various log files as well as returned to the user as error messages.

The supported values for `LOCALE` and `SORT_ORDER_LOCALE` are:

- Chinese-simplified
- Chinese-traditional
- Czech
- Danish
- Dutch
- English-USA
- Finnish
- French
- German
- Greek
- Hebrew
- Italian
- Japanese

Korean
Portuguese
Portuguese-Brazilian
Spanish
Swedish

The default is English-USA. You need to explicitly set the value of this parameter if you want to use a setting other than english-usa.

Example: `LOCALE = "english-usa" ;`

If you want to override the language specified in the XML file, use Analytics Catalog Manager to substitute the language extension shown in the following list:

| Language Extension | Language |
|---------------------------|----------------------|
| cs | Czech |
| da | Danish |
| de | German |
| en | English |
| es | Spanish |
| fi | Finnish |
| fr | French |
| he | Hebrew |
| it | Italian |
| ja | Japanese |
| ko | Korean |
| nl | Dutch |
| pt | Portuguese |
| pt-br | Brazilian Portuguese |
| sv | Swedish |

| Language Extension | Language |
|---------------------------|-----------------------|
| zh | Chinese (Simplified) |
| zh-tw | Chinese (Traditional) |

For more information about Analytics Catalog Manager and language extensions, see the *Siebel Analytics Web Administration Guide*.

Note that these two-letter language extensions for Siebel Analytics are not to be confused with the Siebel eBusiness Applications three-letter language codes shown in *Siebel System Requirements and Supported Platforms*.

SORT_ORDER_LOCALE

This parameter is used to help determine whether the Siebel Analytics Server can function-ship an ORDER BY clause (used in sorting) to an relational database.

In the Siebel Analytics Server Administration Tool, the Features table (from the Features tab of the Database dialog box) specifies the features and functions that the relational database supports. The settings for SORT_ORDER_LOCALE in the Features table and in the NQSConfig.INI file should match only if the database and the Siebel Analytics Server sort data in the same way.

For the relational database and the Siebel Analytics Server to sort data the same way, they must be in agreement on these parameters:

- Base language (the LOCALE and SORT_ORDER_LOCAL parameters)
- Case considerations (the CASE_SENSITIVE_CHARACTER_COMPARISON parameter)
- Binary versus linguistic comparisons (the SORT_TYPE parameter)

Only if the database and the Siebel Analytics Server have equivalent settings in these areas will the SORT_ORDER_LOCALE entries in the Features table and in the NQSConfig.INI file match.

The default value for SORT_ORDER_LOCALE in both the Features table and in the NQSConfig.INI file is english-usa.

If the Siebel Analytics Server and the database sort data differently, the Features table entry `SORT_ORDER_LOCALE` for the database needs to be set to a different value than `english-usa`. Failure to do so can result in wrong answers when multi-database joins are used, or errors using the Union, Intersect and Except operators, which all rely on consistent sorting between the back-end server and the Siebel Analytics Server.

Every database defined in the Physical Layer in the Siebel Analytics Server Administration Tool has a features table associated with it. If you want to override the default value in the Features table for a particular type of relational database, you need to do it for all occurrences of it in the Physical Layer.

Example: `SORT_ORDER_LOCALE = "english-usa" ;`

SORT_ORDER_LOCALE on UNIX Operating Systems

The Analytics Server sets the C-runtime locale during server startup. A value for the setting is specified via the `SORT_ORDER_LOCALE` entry in the `NQSConfig.ini` file. You should always enter a platform-independent name and the corresponding platform-specific name is used. The following table shows the mappings from the platform-independent name (for example, `chinese-simplified`) to the specific name for each of the supported UNIX platforms (for example, `zh_TW.utf8` for HP-UX for `chinese-simplified`). This table is valid starting with the 7.5.3 release.

| SORT_ORDER_LOCALE | Solaris | AIX | HP-UX |
|--------------------------|------------------|-------------|--------------|
| English-USA | en_US.UTF-8 | EN_US.UTF-8 | univ.utf8 |
| French | fr_FR.UTF-8@euro | FR_FR.UTF-8 | fr_FR.utf8 |
| German | de_DE.UTF-8@euro | DE_DE.UTF-8 | de_DE.utf8 |
| Italian | it_IT.UTF-8@euro | IT_IT.UTF-8 | it_IT.utf8 |
| Japanese | ja_JP.UTF-8 | JA_JP.UTF-8 | ja_JP.utf8 |
| Portuguese-Brazilian | pt_BR.UTF-8 | PT_BR.UTF-8 | univ.utf8 |
| Spanish | es_ES.UTF-8@euro | ES_ES.UTF-8 | es_ES.utf8 |
| Swedish | sv_SE.UTF-8 | SV_SE.UTF-8 | sv_SE.utf8 |
| Chinese-simplified | zh_CN.UTF-8 | ZH_CN.UTF-8 | zh_CN.utf8 |
| Chinese-traditional | zh_TW.UTF-8 | ZH_TW.UTF-8 | zh_TW.utf8 |

| SORT_ORDER_LOCALE | Solaris | AIX | HP-UX |
|--------------------------|------------------|-------------|--------------|
| Czech | cs_CZ.UTF-8 | CS_CZ.UTF-8 | univ.utf8 |
| Danish | da_DK.UTF-8 | DA_DK.UTF-8 | univ.utf8 |
| Dutch | nl_NL.UTF-8@euro | NL_NL.UTF-8 | univ.utf8 |
| Finnish | fi_FI.UTF-8@euro | FI_FI.UTF-8 | univ.utf8 |
| Greek | el_GR.UTF-8@euro | EL_GR.UTF-8 | univ.utf8 |
| Hebrew | he_IL.UTF-8 | HE_IL.UTF-8 | univ.utf8 |
| Korean | ko_KR.UTF-8 | KO_KR.UTF-8 | ko_KR.utf8 |
| Portuguese | pt_PT.UTF-8@euro | PT_PT.UTF-8 | univ.utf8 |

If you do not have the proper locale installed, the Siebel Analytics Server will not start, and the NQSServer.log file will contain the following error:

```
[47013] NLS locale xxx is not supported by the operating system.
```

where *xxx* is the locale specified in the NQSConfig.ini file for the SORT_ORDER_LOCALE parameter.

The response to this error is to install the locale indicated in the table for the requested language.

The error can also occur with a Windows platform. For Windows, the fix is to add the corresponding language pack using the Regional Settings dialog box.

SORT_TYPE

Specifies the type of sort to perform. The default value is BINARY. Binary sorts are faster than nonbinary sorts.

Valid values are BINARY and DEFAULT. If you specify DEFAULT, a nonbinary sort is performed; this yields better sort results for data that contains accented characters.

Example: SORT_TYPE = "BINARY" ;

CASE_SENSITIVE_CHARACTER_COMPARISON

Specifies whether the Siebel Analytics Server differentiates between uppercase and lowercase characters when performing comparison operations. Valid values are ON and OFF. When set to OFF, case is ignored. When set to ON, case is considered for comparisons. For binary sorts, case sensitivity for the server and for the relational database should set the same way.

Example: CASE_SENSITIVE_CHARACTER_COMPARISON = OFF ;

UPPERCASE_USERNAME_FOR_INITBLOCK

Specifies whether or not the users are authenticated with case sensitivity. The default value is NO (or false internally). If it is set to YES, then all user names are changed to uppercase for authentication purposes in the SiebelAnalytics.rpd file. Otherwise, case is maintained.

Example: UPPERCASE_USERNAME_FOR_INITBLOCK = NO ;

NULL_VALUES_SORT_FIRST

Specifies if NULL values sort before other values (ON) or after (OFF). ON and OFF are the only valid values. The value of NULL_VALUES_SORT_FIRST should conform to the underlying database. If there are multiple underlying databases that sort NULL values differently, set the value to correspond to the database that is used the most in queries.

Example: NULL_VALUES_SORT_FIRST= OFF ;

DATE_TIME_DISPLAY_FORMAT

Specifies the format for how date/time stamps are input to and output from the Siebel Analytics Server.

Example: DATE_TIME_DISPLAY_FORMAT = "yyyy/mm/dd hh:mi:ss" ;

DATE_DISPLAY_FORMAT

Specifies the format for how dates are input to and output from the Siebel Analytics Server.

NOTE: Specify the year as either 2-digit (yy) or 4-digit (yyyy). Separators can be any character except y, m, or d.

Example: DATE_DISPLAY_FORMAT = "yyyy/mm/dd" ;

TIME_DISPLAY_FORMAT

Specifies the format for how times are input to and output from the Siebel Analytics Server.

Example: TIME_DISPLAY_FORMAT = "hh:mi:ss" ;

WORK_DIRECTORY_PATHS

Specifies one or more directories for temporary space. Each directory listed needs to be an existing fully-qualified, writable directory pathname, with double quotes (") surrounding the pathname. Specify mapped directories only. UNC path names and network mapped drives are allowed only if the service runs under a qualified user account. To change the account under which the service is running, see [“To change the account under which a Windows service runs” on page 50](#). Specify multiple directories with a comma separated list. Valid values are any fully qualified pathname to an existing, writable directory.

For optimum performance, temporary directories should reside on high performance storage devices. If you specify more than one directory, they should reside on different drives.

Syntax: WORK_DIRECTORY_PATHS = "<full_directory_path_1>" [, "<full_directory_path_2>" { , "<full_directory_path_n>" }] ;

Example 1: WORK_DIRECTORY_PATHS = "C:\Temp" ;

Example 2: WORK_DIRECTORY_PATHS = "D:\temp", "F:\temp" ;

NOTE: Specifying more than one directory per drive does not improve performance because file I/O takes place through the same I/O controller. In general, specify only one directory per disk drive. Specifying multiple directories on different drives will improve the overall I/O throughput of the Siebel Analytics Server because internally, the processing files are allocated using a round-robin algorithm that balances the /O load across the given disk drives.

SORT_MEMORY_SIZE

Specifies the maximum amount of memory to be used for each sort operation. Multiple operations can each use memory up to the value specified. The limit for SORT_MEMORY_SIZE is determined by the physical memory of the server machine and on the number of sort operations that might occur simultaneously. Specify KB for kilobytes, MB for megabytes, and no units for bytes. For more information, see the section [“How the SIZE Parameters Affect Siebel Analytics Performance”](#) on page 286.

Example: SORT_MEMORY_SIZE = 4 MB ;

SORT_BUFFER_INCREMENT_SIZE

Specifies the increment that the sort memory size is increased by as more memory is needed. As more memory is required, the size will increase by the value specified until it reaches the value of SORT_MEMORY_SIZE. For more information, see the section [“How the SIZE Parameters Affect Siebel Analytics Performance”](#) on page 286.

Example: SORT_BUFFER_INCREMENT_SIZE = 256 KB ;

VIRTUAL_TABLE_PAGE_SIZE

Specifies the size of a memory page for the Siebel Analytics Server internal processing. A higher value reduces I/O but increases memory usage, especially in a multi-user environment. For more information, see the section [“How the SIZE Parameters Affect Siebel Analytics Performance”](#) on page 286.

Example: VIRTUAL_TABLE_PAGE_SIZE = 128 KB ;

DATA_SOURCE_BULK_FETCH_SIZE

Specifies the maximum size of a bulk fetch page for retrieving data from a data source. For more information, see the section [“How the SIZE Parameters Affect Siebel Analytics Performance”](#) on page 286.

Example: DATA_SOURCE_BULK_FETCH_SIZE = 128 KB ;

How the SIZE Parameters Affect Siebel Analytics Performance

This section explains the interrelationships among the SIZE parameters and how they affect the performance of Siebel Analytics.

- **SORT_MEMORY_SIZE and SORT_BUFFER_INCREMENT_SIZE**

The size specified by `SORT_MEMORY_SIZE` sets the upper limit on how large the sorting buffer can be in the Siebel Analytics Server. If this limit is exceeded, data is sorted in allotments of the size set by `SORT_MEMORY_SIZE` and the sorted sets are merged together. For example, suppose `SORT_MEMORY_SIZE` is set to 4 MB and the size of the data to be sorted is 32 MB. The server will perform the sort once per each 4 MB of data, for a total of eight sort operations, and then merge the results into a single result set. This technique allows the Siebel Analytics Server to sort data of indefinite size.

The merge process itself is generally not costly in terms of resources, but it does include a read and write of each result set in a temporary file. To reduce the time this takes, increase the `SORT_MEMORY_SIZE`. This parameter can be tuned over time by taking into consideration the data size of the query and the number of concurrent users.

- **SORT_BUFFER_INCREMENT_SIZE**

This parameter defines the increment in which `SORT_MEMORY_SIZE` should be reached. For example, suppose `SORT_MEMORY_SIZE` is set to 4 MB and the data to be sorted is just one megabyte. As data is fed into the sort routine, the size of the sort buffer increases only by the increment size, rather than the full size allowed by `SORT_MEMORY_SIZE`. This mechanism allows the Siebel Analytics Server to sort smaller result sets efficiently without wasting memory.

■ VIRTUAL_TABLE_PAGE_SIZE

Several operations—sort, join, union and database fetch—can require memory resources beyond those available to the Siebel Analytics Server. To manage this condition, the server uses a virtual table management mechanism that provides a buffering scheme for processing these operations. When the amount of data exceeds the VIRTUAL_TABLE_PAGE_SIZE, the remaining data is buffered in a temporary file and placed in the virtual table as processing continues. This mechanism supports dynamic memory sizes and ensures that any row can be obtained dynamically for processing queries.

When VIRTUAL_TABLE_PAGE_SIZE is increased, I/O operations are reduced. Complex queries may use 20 to 30 virtual tables, while simple queries may not even require virtual tables. The default size of 128 KB is a reasonable size when one considers that the size for virtual paging in Windows NT is 64 KB. This parameter can be tuned depending on the number of concurrent users and the average query complexity. In general, setting the size higher than 256 KB does not yield a corresponding increase in throughput due to the 64 KB size limit of Windows NT system buffers, as each I/O still goes through the system buffers.

DATA_SOURCE_BULK_FETCH_SIZE

This parameter is for use in the database gateways. It sets the bulk fetch buffer size. This is currently set internally to its default value of 128 KB; any other setting is ignored.

USE_LONG_MONTH_NAMES

This specifies whether month names will be returned as full names, such as JANUARY and FEBRUARY, or as three-letter abbreviations, such as JAN and FEB. Valid values are YES and NO. Specify YES to have month names returned as full names or NO to have months names returned as three-letter abbreviations. The default value is NO.

Example: USE_LONG_MONTH_NAMES = NO ;

USE_LONG_DAY_NAMES

This specifies whether day names will be returned as full names, such as MONDAY and TUESDAY, or as three-letter abbreviations, such as MON and TUE. Valid values are YES and NO. Specify YES to have day names returned as full names or NO to have day names returned as three-letter abbreviations. The default value is NO.

Example: USE_LONG_DAY_NAMES = NO ;

Parameters in the Configuration File—Security Section

The security parameters specify default values for the Siebel Analytics Server security features. For more information about security, see the chapter on security in *Siebel Analytics Server Administration Guide*.

DEFAULT_PRIVILEGES

Specifies the values users and groups are assigned when they are initially created. Valid values are NONE and READ. The default value is READ.

Example: DEFAULT_PRIVILEGES = READ ;

PERFORM_OS_AUTHENTICATION

Specifies whether the Siebel Analytics Server uses Windows NT operating system authentication to authenticate the Siebel Analytics Server users. Valid values are YES and NO.

Example: PERFORM_OS_AUTHENTICATION = YES ;

AUTHENTICATION_TYPE

Specifies the type of authentication the Siebel Analytics Server uses to authenticate the Siebel Analytics Server users. Valid values are NQS, DATABASE, and BYPASS_NQS. The default authentication mechanism is NQS.

- If you select NQS, then the authentication is done by the Siebel Analytics Server. Note, however, that for Siebel Analytics applications, the Siebel Analytics Server in turn can be set up to authenticate using Microsoft ADSI, an LDAP server, or a database.
- If you select DATABASE, specify the database name in the Physical Layer of the repository to be used for database authentication. The first connection pool for this database is used for authentication. When the user logs in to the Siebel Analytics Server, the submitted login name and password is used to connect to the database. If this connection succeeds, the user is considered to be successfully authenticated.

- If you select `BYPASS_NQS`, users are authenticated against the database to which their queries are sent, using the submitted username and password. For example, if a user runs a query tool against the Siebel Analytics Server with the username of “Test” and a password of “Test,” this username and password are used to connect to the underlying database server. If this represents a valid user to the underlying database server, the user is considered authenticated. The user’s privileges are enforced by the underlying database server based upon the username used to log in, as appropriate.

Example 1: `AUTHENTICATION_TYPE = NQS ;`

Example 2: `DATABASE = "Goldmine" ;`

PROJECT_INACCESSIBLE_COLUMN_AS_NULL

The flag `PROJECT_INACCESSIBLE_COLUMN_AS_NULL` must be set to `TRUE` to enable the SQL command `CHOOSE`.

The SQL command

```
CHOOSE(expr1, expr2, .... exprn)
```

selects the first valid expression from a list of expressions. A valid expression here is an expression in which all referenced columns are accessible by the current query user.

Parameters in the Configuration File–Server Section

The parameters in the Server section define defaults and limits for the Siebel Analytics Server.

SERVER_NAME

A logical name identifying the Siebel Analytics Server.

Example: `SERVER_NAME = Siebel_Analytics_Server ;`

CLIENT_SERVER_SHARED_MEMORY_SIZE

The size of the shared memory block dedicated to each request and session connecting to the server.

Example: `CLIENT_SERVER_SHARED_MEMORY_SIZE = 32 KB ;`

SESSION_TIME_OUT_SECONDS

Specifies the time, in seconds, that a session will wait for a connection to occur before terminating.

Example: `SESSION_TIME_OUT_SECONDS = 300 ;`

MAX_SESSION_LIMIT

Specifies the maximum number of connections allowed by the server. If this number is exceeded, the server will refuse the connection request. The limit is 65,535 connections.

Example: `MAX_SESSION_LIMIT = 100 ;`

MAX_REQUEST_PER_SESSION_LIMIT

Specifies the maximum number of logical requests per session. This is how many open requests there will be, per session, at the same time. The limit is 65535 logical requests per session.

NOTE: Usually, individual users will have only one open request per session at the same time. Application programs and Siebel Analytics Web, however, will typically have more than one open at the same time. In general, the default value of 100 should be sufficient for most environments, but this parameter should be tuned based on the application environment and the client tools in use.

Example: `MAX_REQUEST_PER_SESSION_LIMIT = 100 ;`

SERVER_THREAD_RANGE

For each Siebel Analytics Server request, this specifies configuration information for thread allocation. The lower bound of the range specifies the number of threads initially allocated, and the upper bound of the range specifies the maximum number of threads to be allocated. The thread pool grows and shrinks in 5 thread increments until the upper or lower bound is reached. If there are fewer threads than sessions, sessions will share the available number of threads on a first come-first served basis.

Set both values the same to maximize the benefits of thread pooling. The default value (40-40) eliminates thread start and exit activities, which can degrade performance.

Example: `SERVER_THREAD_RANGE = 40-40 ;`

SERVER_THREAD_STACK_SIZE

Specifies the memory stack size allocated for each server thread. The default of 0 sets the stack size as 1 MB in Windows NT.

Example: `SERVER_THREAD_STACK_SIZE = 0 MB ;`

DB_GATEWAY_THREAD_STACK_SIZE

Specifies the memory stack size allocated for each the Siebel Analytics Server COM Gateway thread. The default of 0 sets the stack size as 1 MB in Windows NT.

Example: `DB_GATEWAY_THREAD_STACK_SIZE = 0 KB ;`

MAX_EXPANDED_SUBQUERY_PREDICATES

This controls the maximum number of values that may be in an IN value list populated by a subquery. The default is 8,192 values.

Example: `MAX_EXPANDED_SUBQUERY_PREDICATES = 8192 ;`

MAX_QUERY_PLAN_CACHE_ENTRIES

Controls the number of cached compiler query plans. The query plan cache is an internal performance feature that increases the speed of the query compilation process by caching plans for the most recently used queries.

Example: `MAX_QUERY_PLAN_CACHE_ENTRIES = 10240 ;`

MAX_DRILLDOWN_INFO_CACHE_ENTRIES

Controls the number of cached Action Link information entries per repository. This increases the speed of computing Action Link information by caching the Action Link information for the most recently used queries.

Example: `MAX_DRILLDOWN_INFO_CACHE_ENTRIES = 10240 ;`

MAX_DRILLDOWN_QUERY_CACHE_ENTRIES

Controls the number of cached Action Link query entries per repository. This increases the speed of drilling down by caching the Action Link results for the most recently used queries.

Example: MAX_DRILLDOWN_QUERY_CACHE_ENTRIES = 10240 ;

CLUSTER_PARTICIPANT

Specifies whether the Siebel Analytics Server that is using this configuration file is a member of a Siebel Analytics Server cluster. Valid values are YES and NO. The default value is NO.

If the server is to be a member of a Siebel Analytics Server cluster, uncomment the parameters “[REPOSITORY_PUBLISHING_DIRECTORY](#)” and “[REQUIRE_PUBLISHING_DIRECTORY](#),” and supply valid values for them.

NOTE: When CLUSTER_PARTICIPANT is set to YES, this server needs to have a valid, configured NQClusterConfig.INI file in the Config subdirectory, located in the Siebel Analytics software installation directory. For more information, see [Appendix B](#), “NQClusterConfig.INI File Reference.”

Example: CLUSTER_PARTICIPANT = YES ;

REPOSITORY_PUBLISHING_DIRECTORY

When the parameter CLUSTER_PARTICIPANT is set to YES, this specifies the location of the repository publishing directory shared by all Siebel Analytics Servers participating in the cluster. There is no default value for this parameter.

When a repository is updated in online mode, it is published to this location. All clustered servers will examine this location upon startup for any repository changes. This needs to be a valid location visible to all servers in the cluster even if you anticipate that no repositories will be updated in online mode.

The directory should reside on a shared file system. The directory needs to be a valid fully-qualified directory pathname, with double quotes (") surrounding the pathname. Both UNC and mapped directories are supported. Do not specify a relative path name, or the Repository subdirectory (located in the Siebel Analytics software installation directory) as the location of the repository publishing directory.

This entry is required on every Siebel Analytics Server that is to participate in the cluster. The Siebel Analytics Server designated as the master server for online repository changes (from the parameter “[MASTER_SERVER](#)” on [page 309](#) in the NQClusterConfig.INI file) needs to have read and write access to this directory. The Siebel Analytics Servers in the cluster (from the parameter “[SERVERS](#)” on [page 309](#) in the NQClusterConfig.INI file) need to have read and write access to this directory as well. All entries need to reference the same actual directory, although different names can be specified to accommodate differences in drive mappings.

These are examples:

```
REPOSITORY_PUBLISHING_DIRECTORY = "z:\SiebelAnalytics\Publish";  
REPOSITORY_PUBLISHING_DIRECTORY = "\\ClusterSrv\Publish";
```

REQUIRE_PUBLISHING_DIRECTORY

When the parameter CLUSTER_PARTICIPANT is set to YES, this specifies that the repository publishing directory (from the parameter REPOSITORY_PUBLISHING_DIRECTORY) needs to be available in order for this Siebel Analytics Server to start up and join the cluster. The default value is YES. When set to YES, if the publishing directory is not available at startup or if an error is encountered while the server is reading any of the files in the directory, an error message will be logged in the NQServer.log file and the server will shut down.

To allow this Siebel Analytics Server to start up and join the cluster even if the publishing directory is not available, set this value to NO. When set to NO, the server will join the cluster and a warning message will be logged in the NQServer.log file. Any online repository updates will not be reflected in the server’s Repository directory (located in the Siebel Analytics software installation directory). This could result in request failures, wrong answers, and other problems. However, this could be useful in situations where online repository editing will be done infrequently and the goal is to keep the cluster operational even if some servers have stale repositories.

Example: REQUIRE_PUBLISHING_DIRECTORY = YES;

INIT_BLOCK_CACHE_ENTRIES

Controls the number of initialization block result sets that are cached with respect to row-wise initialization. The cache key is the fully instantiated initialization block SQL. The default value is 20. Because this parameter affects internal operations for localized versions of the Siebel Analytics software, we recommend that you do not change this value unless instructed to do so.

Example: INIT_BLOCK_CACHE_ENTRIES = 20 ;

CLIENT_MGMT_THREADS_MAX

This specifies the number of management threads to allocate for managing Siebel Analytics Server client/server communications. The default value of 5 is sufficient for server communications with the Administration Tool and when Siebel Analytics Web is the only main client process.

Each client process consumes a management thread. If you plan to run multiple Analytics Web client instances or multiple third-party client instances, increase the number of management threads to match the number of client instances. If the number of running client instances exceeds the number of management threads allocated, worker threads will be consumed.

Example: CLIENT_MGMT_THREADS_MAX= 10 ;

RPC_SERVICE_OR_PORT

This specifies the Remote Procedure Call (RPC) Service or TCP/IP port the Siebel Analytics Server should use for client/server communications. The default is 9703.

When using the Analytics ODBC Wizard to set up ODBC data sources for the Siebel Analytics Server, the port number specified in the Port field on the Enter Logon Information screen should match the port number specified here. If you change the port number in the configuration file, remember to reconfigure any affected ODBC data sources to use the new port number.

Example: RPC_SERVICE_OR_PORT= 9703 ;

ENABLE_DB_HINTS

This enables optional hints to be passed along with a SQL statement to an Oracle database. Database hints are discussed in *Siebel Analytics Server Administration Guide*.

PREVENT_DIVIDE_BY_ZERO

This parameter controls the behavior for when a division by zero occurs. If set to Yes, then a NULL value is returned. If set to No, then the query is terminated and an appropriate error is returned to the user.

Parameters in the Configuration File–Dynamic Library Section

This section contains one entry for each dynamic link library (DLL) used to make connections to the Siebel Analytics Server.

Syntax: *<logical_name>* = *<dynamic_library>* ;

where:

| | |
|------------------------|--|
| <i>logical_name</i> | A logical name for the dynamic link library. These logical names also appear in the Connection Pool dialog box. |
| <i>dynamic_library</i> | The name of the associated dynamic library. These are located in the Bin subdirectory in the Siebel Analytics software installation directory. |

Do not make any changes to this section unless instructed to do so by Siebel Technical Support.

Parameters in the Configuration File–User Log Section

There is one parameter in the User Log section. It specifies the size of the NQQuery.log file. For each log parameter, the following applies:

Valid values: ON, OFF, YES, NO

ON or YES specifies the function is enabled, OFF or NO specifies the function is disabled.

The log file resides in the Log subdirectory (together with the Install.log file and the NQServer.log file) in the Siebel Analytics software installation directory. Entries in the NQQuery.log file can be viewed using a text editor such as Windows Notepad, or the nQLogViewer executable.

For more information about the NQQuery.log file, see the chapter on administering the query environment in *Siebel Analytics Server Administration Guide*.

NOTE: The NQServer.log file logs activity automatically about the Siebel Analytics Server, including information about server startup failures and queries that result in time limits or row limits being exceeded when the Status Max Time or Status Max Rows option is set to Warn. The Install.log file logs activity automatically about installation activities. You can view these log files using a text editor such as Windows Notepad.

USER_LOG_FILE_SIZE

Specifies the size to which the NQQuery.log file is allowed to grow. When this limit is reached, the log file closes and logging ceases.

Example: USER_LOG_FILE_SIZE = 10 MB ;

Parameters in the Configuration File—Usage Tracking Section

The usage tracking parameters define default values for collection of usage tracking statistics on each logical query submitted to the Siebel Analytics Server. For more information about usage tracking, see the chapter on administering the query environment in *Siebel Analytics Server Administration Guide*.

ENABLE

Enables or disables collection of usage tracking statistics. Valid values are ON and OFF. The default value is OFF. When set to OFF, statistics are not accumulated. When set to ON, statistics are accumulated for each logical query. The collection of usage tracking statistics is, by default, disabled.

Example: ENABLE = OFF ;

DIRECT_INSERT

Specifies whether statistics are written to a database table or to a local file. Direct insertion to a database table is recommended.

The following parameters are valid if DIRECT_INSERT is set to YES:
PHYSICAL_TABLE_NAME, CONNECTION_POOL, BUFFER_SIZE,
BUFFER_TIME_LIMIT_SECONDS, and MAX_INSERTS_PER_TRANSACTION.

The following parameters are valid if `DIRECT_INSERT` is set to `NO`:
`STORAGE_DIRECTORY`, `CHECKPOINT_INTERVAL_MINUTES`,
`FILE_ROLLOVER_INTERVAL_MINUTES`, and `CODE_PAGE`.

Example: `DIRECT_INSERT = YES ;`

PHYSICAL_TABLE_NAME

Specifies the table in which to insert records corresponding to the query statistics. The table name is the fully qualified name as it appears in the physical layer of the Server Administration Tool.

Example: `PHYSICAL_TABLE_NAME = "Siebel Analytics
Usage"."Catalog"."dbo"."S_NQ_ACCT" ;`

CONNECTION_POOL

Specifies the connection pool to use for inserting records into the usage tracking table. This is the fully qualified name as it appears in the physical layer of the Server Administration Tool.

Example: `CONNECTION_POOL = "Siebel Analytics Usage"."Connection
Pool" ;`

BUFFER_SIZE

Specifies the amount of memory used to temporarily store insert statements. The buffer allows the insert statements to be issued to the usage tracking table independently of the query that produced the statistics to be inserted. If the buffer fills up then subsequent queries' statistics are discarded until the insert threads service the buffer entries.

Example: `BUFFER_SIZE = 1 MB ;`

BUFFER_TIME_LIMIT_SECONDS

Specifies the maximum amount of time that an insert statement will remain in the buffer before it is issued to the usage tracking table. This time limit ensures that the Siebel Analytics Server will issue the insert statements in a timely manner even during periods of extended quiescence.

Example: `BUFFER_TIME_LIMIT_SECONDS = 5 ;`

NUM_INSERT_THREADS

Specifies the number of threads that will remove insert statements from the buffer and issue them to the usage tracking table. The number of threads should not exceed the total number of threads assigned to the connection pool.

Example: NUM_INSERT_THREADS = 5 ;

MAX_INSERTS_PER_TRANSACTION

Specifies the number of records to group together as a single transaction when inserting into the usage tracking table. Increasing the number may slightly increase performance but will increase the possibility of inserts being rejected due to deadlocks in the database.

Example: MAX_INSERTS_PER_TRANSACTION = 1 ;

STORAGE_DIRECTORY

Specifies the full path to the directory used to store usage tracking log files. The directory listed needs to be a valid fully-qualified, writable directory pathname, with double quotes (") surrounding the pathname. Specify mapped directories only. UNC path names and network mapped drives are allowed only if the service runs under a qualified user account. To change the account under which the service is running, see [“To change the account under which a Windows service runs” on page 50](#). Valid values are any fully qualified pathname to an existing, writable directory.

NOTE: Do not specify the same directory used to store server query statistics.

If usage tracking is enabled, but no storage directory is specified, the files are written to the Log subdirectory in the Siebel Analytics software installation directory.

Example: STORAGE_DIRECTORY = "C:\Temp\UsageTracking" ;

CHECKPOINT_INTERVAL_MINUTES

Specifies how often the usage tracking data is flushed to disk. Setting this interval higher increases the amount of data that may be lost in the event of an abnormal server shutdown. Setting this interval lower incurs additional overhead. The default is 5 minutes.

NOTE: When the interval is set to 0, the Siebel Analytics Server attempts to write usage tracking data to disk with minimal time between attempts. This can negatively affect server performance, and is strongly discouraged.

Example: CHECKPOINT_INTERVAL_MINUTES = 5 ;

FILE_ROLLOVER_INTERVAL_MINUTES

Specifies the time, in minutes, before the current usage tracking log file is closed and a new file created. For example, if this entry is set to 60 minutes, then 24 usage tracking log files will be created each day. The default is 240 minutes (4 hours).

If the checkpoint interval equals or exceeds the rollover interval, only the rollover occurs explicitly; the checkpoint only occurs implicitly when the old usage tracking log file is closed.

NOTE: When the checkpoint interval is set to 0, the Siebel Analytics Server attempts to close current usage tracking log files and open new log files with minimal time between attempts. This can negatively affect server performance and result in a large number of usage tracking log files in the storage directory. Setting this interval to 0 is strongly discouraged.

Example: FILE_ROLLOVER_INTERVAL_MINUTES = 240 ;

CODE_PAGE

For multilingual repositories, this specifies the type of output code page to use when writing statistics to disk. Valid values include any valid code page number (such as 1252), and other globally recognized output code page types. The default value is ANSI. USC-2 is currently not supported. The type depends upon the database loader being used. For example, to support multilingual repositories for database loaders used by Oracle and DB2, specify UTF8. Enclose the value in double quotes.

Example: `CODE_PAGE = "ANSI" ;`

Parameters in the Configuration File—Optimization Flags Section

There is one parameter in the Optimization Flags section. It is a special parameter to override the behavior of the Siebel Analytics Server in certain situations.

STRONG_DATETIME_TYPE_CHECKING

Use this parameter to relax strong type checking to prevent some date/time data type incompatibilities in queries from being rejected. For example, a query of the form “datetime op string-literal” technically contains a datetime data type incompatibility and would normally be rejected by the Siebel Analytics Server.

Valid values are ON and OFF. The default value is ON, which means that strong type checking is enabled and queries containing datetime data type incompatibilities will be rejected. This is the recommended setting.

To relax the strong type checking, set the value to NO. Note that invalid queries or queries with severe datetime incompatibilities will still be rejected. Note also that the query could still fail, for example, if the relational database implements a similar strong type checking.

Example: `STRONG_DATETIME_TYPE_CHECKING=ON ;`

NQSConfig.INI File Reference

Configuration File Parameters and Syntax

The Siebel Analytics Server software uses an initialization file to set cluster configuration parameters upon startup for the Siebel Analytics Cluster Server feature. This initialization file, the NQClusterConfig.INI file, includes parameters to customize behavior based on the requirements of each individual installation. This chapter provides the rules for using the file, shows a sample file, and provides definitions and syntax for each parameter. The following sections are included:

- [“About the Siebel Analytics Cluster Configuration Initialization File” on page 303](#)
- [“Sample Cluster Configuration File” on page 305](#)
- [“Parameter and Syntax Descriptions in the Cluster Section” on page 307](#)

About the Siebel Analytics Cluster Configuration Initialization File

The Siebel Analytics Server reads the NQClusterConfig.INI file after it reads the NQSConfig.INI file (when [“CLUSTER_PARTICIPANT” on page 293](#) is set to YES in the NQSConfig.INI file). Cluster Controllers also read this file.

If a Siebel Analytics Server detects a syntax error while reading the file, it logs the error to its NQServer.log file, located in the Log subdirectory in the Siebel Analytics software installation directory. If a Cluster Controller detects an error while reading the file, the error is logged to its NQClusterConfig.INI file, located in the Log subdirectory in the Siebel Analytics software installation directory. If a machine is hosting both a Siebel Analytics Server and a Cluster Controller, messages will be written to both logs. There may also be a summary message in the system log relating to the error.

You need to correct the error and start the affected Siebel Analytics Server or Cluster controller again. Repeat this process until no errors are detected in the configuration file.

For information about the NQConfig.INI file, see [Appendix A, “NQConfig.INI File Reference.”](#)

Cluster Configuration File Location

The cluster configuration initialization is the NQClusterConfig.INI file. It resides in the Config subdirectory in the Siebel Analytics software installation directory. Do not change the name of the file or its location. All Siebel Analytics Servers and cluster controllers that are to participate in the cluster need to have configured NQClusterConfig.INI files.

NOTE: The Siebel Analytics Server administrator needs to make sure that a configured NQClusterConfig.INI file resides in the Config subdirectory of every Siebel Analytics Server and cluster controller that is to participate in the cluster. In general, it is easiest to configure the file once, copy it to the Config directories of the machines in the cluster, and then make machine-specific changes when required. If you correct an error, make sure the correction is propagated to the NQClusterConfig.INI files of all affected machines.

Adding Comments to the Cluster Configuration File

You can add comments anywhere in the NQClusterConfig.INI file. Comments need to begin with either of the following:

- #
- //

Any text following these comment characters up to the end of the line is ignored when the initialization file is read.

Rules for Cluster Configuration File Parameters

Note the following about each parameter entry in the NQClusterConfig.INI file:

- Entries need to be within the Cluster section and contained within the NQClusterConfig.INI file. Do not add the Cluster section to the NQSConfig.INI file.
- Any syntax errors will prevent the Siebel Analytics Cluster Server feature from starting up. If a Siebel Analytics Server detects a syntax error while reading the file, it logs the error to its NQServer.log file. If a cluster controller detects an error while reading the file, the error is logged to its NQCluster.log file.

Changing Cluster Configuration File Parameters

Parameter entries are read upon startup. If, while a Siebel Analytics Server or cluster controller is running, you change an entry that will affect the operations of the cluster, you need to shut down the machines in the cluster, propagate the changes to other machines in the cluster, and then restart all affected machines. Your changes will then take effect.

Sample Cluster Configuration File

The following is a sample NQClusterConfig.INI file. The NQClusterConfig.INI file is located in the Config subdirectory in the Siebel Analytics software installation directory. For detailed explanations of the parameters read [“Parameter and Syntax Descriptions in the Cluster Section” on page 307](#).

This sample shows the file as it appears in the Windows environment. All parameter explanations are targeted towards the Windows environment.

```
#####
#
# NQClusterConfig.INI
#
# Copyright (c) 2000-2004 Siebel Systems, Inc.
#
# This file specifies parameters that relate to the
# configuration of a Siebel Analytics Cluster and the interaction
# among the Siebel Analytics Cluster Controller and
# and Siebel Analytics Server components of a cluster.
#
# This file is processed by both Siebel Analytics Cluster
# Controllers and clustered Siebel Analytics Servers. It is
# recommended that all components participating in a cluster
```

```
# have identical copies of this file.
#
# Values shown in quotes may be quoted with matching
# single (') or double (") quotes. If a value contains
# only alphanumeric characters and doesn't match a
# keyword, the quotes may be omitted.
# Please use only DNS names, not IP addresses!
#

#####
#
# Cluster Configuration File
#
#####

[ CLUSTER ]
ENABLE_CONTROLLER = no;      // Is Cluster Controller on
// this node enabled? (note that Siebel Analytics Server clustering
// is enabled via NQConfig.INI)

PRIMARY_CONTROLLER = "<machine_name>"; // NetBIOS name
// of Primary Cluster Controller

SECONDARY_CONTROLLER = "<machine_name>"; // Secondary Cluster
// Controller; Must be distinct from PRIMARY_CONTROLLER

SERVERS = "<analytics_server_name01>";
// [,"<analytics_server_name02>"]... Siebel Analytics Servers -
// Up to 16 unique machines in list

MASTER_SERVER = "<analytics_server_name>"; // NetBIOS name of
// machine with Siebel Analytics Server that holds
// the master copies of the repositories (must be in SERVERS list)

SERVER_POLL_SECONDS = 5;
// Siebel Analytics Server to Cluster Controller polling frequency

CONTROLLER_POLL_SECONDS = 5;
// Cluster Controller to Cluster Controller polling frequency

CLIENT_SERVER_PORT = 9703; // Outfacing port used for ODBC
// connections on the Siebel Analytics Servers (aka
// RCP_SERVICE_OR_PORT in NQConfig.INI), (not registered with IANA,
// must be verified), will replace SERVER_PORT
```

```

CLIENT_CONTROLLER_PORT = 9706;    // Outfacing port used for
// clustered ODBC connections on the Cluster Controllers (not
// registered with IANA, must be verified), will replace
// CONTROLLER_PORT

MONITOR_CONTROLLER_PORT = 9700;    // TCP/UDP Port for intracluster
// communication with Cluster Controllers (not registered with IANA,
// must be verified)

MONITOR_SERVER_PORT = 9701;    // TCP/UDP Port for intracluster
// communication with clustered Analytics Servers (not registered
// with IANA, must be verified)

#SERVER_MANAGER_PORT = 9702;    // Port used by the Server Manager
// (only needed on UNIX)

```

Parameter and Syntax Descriptions in the Cluster Section

The parameters in the Cluster section provide configuration information for the Siebel Analytics Cluster Server feature. The NQClusterConfig.INI file parameters are described in the following section. The parameters are listed in the order they appear in the configuration file.

ENABLE_CONTROLLER

This parameter is for machines that will host a Cluster Controller. (A single machine can host a Cluster Controller, a Siebel Analytics Server, or one of each.) When set to YES, it specifies that the Cluster Controller functionality is enabled on this machine (the parameters “[PRIMARY_CONTROLLER](#)” and “[SECONDARY_CONTROLLER](#)” determine whether this machine is to act as the primary or secondary Cluster Controller). Valid values are YES and NO.

When set to NO, or commented out, the Cluster Controller functionality is not enabled. Upon startup, a log entry will be generated in the NQCluster.log file indicating this. The NO setting allows the Siebel Analytics Server administrator to temporarily disable a Cluster Controller if, for example, the machine is being serviced.

Example: `ENABLE_CONTROLLER = YES;`

PRIMARY_CONTROLLER

Identifies the computer that is to act as the primary Cluster Controller. This is the computer that has primary responsibility for monitoring the operational configuration of the servers in the cluster and assigning session requests within the cluster. This parameter is required.

A machine can host one Siebel Analytics Server, one Cluster Controller, or one of each. The machine acting as the primary Cluster Controller needs to be on the same subnet as the other machines in the cluster.

Specify the machine name of the computer that is to be the primary Cluster Controller. This needs to be the NetBIOS name (computer name) of the machine. Double or single quotes are not required if the value consists of only non-key, non-reserved words, or alphanumeric characters.

Example: PRIMARY_CONTROLLER = SERVER01 ;

SECONDARY_CONTROLLER

Identifies the machine acting as the secondary Cluster Controller. This is the computer that will assume responsibility for monitoring the operational configuration of the servers in the cluster and assigning session requests within the cluster if the primary Cluster Controller is unavailable.

A machine can host one Siebel Analytics Server, one Cluster Controller, or one of each. The machine acting as the secondary Cluster Controller needs to be on the same subnet as the other machines in the cluster. It also needs to be a physically different machine than the primary Cluster Controller.

This parameter is optional. If you do not specify a secondary Cluster Controller, the cluster will not be operational if the primary Cluster Controller is unavailable, although sessions already assigned will continue to operate.

Specify the machine name of the computer that is to be the secondary Cluster Controller. This needs to be the NetBIOS name (computer name) of the machine. Double or single quotes are not required if the value consists of only non-key, non-reserved words, or alphanumeric characters. Do not specify the same machine name as that used in the PRIMARY_CONTROLLER parameter.

Example: SECONDARY_CONTROLLER = SERVER02 ;

SERVERS

Identifies the Siebel Analytics Servers that will belong to this cluster. A cluster can contain a maximum of 16 Siebel Analytics Servers. A server can belong to only one cluster. This parameter is required.

Specify the machine names of the Siebel Analytics Server machines in this cluster. This needs to be the NetBIOS name (computer name) of the machine. Separate the machine names with a comma (,). Double or single quotes are not required if the value consists of only non-key, non-reserved words, or alphanumeric characters.

If the names of the machines you specified as the primary and secondary Cluster Controllers are also hosting Siebel Analytics Servers, make sure to include their names in this list as well.

Example: SERVERS = SERVER01,SERVER02,SERVER03,SERVER04,
SERVER05,SERVER06,SERVER07;

MASTER_SERVER

Identifies the Siebel Analytics Server in the cluster that is to function as the master server for the cluster for online repository editing. This is the Siebel Analytics Server in the SERVERS list that the Administration Tool will connect to for online repository changes. When the changes are saved, the resulting repository is published so the changes can be propagated to the servers in the cluster. (For more information about the location of the publishing directory, see the parameter [“REPOSITORY_PUBLISHING_DIRECTORY” on page 293 in Chapter A, “.](#)”)

This parameter is required. Only one server may be specified as the master server.

Specify the machine name of the Siebel Analytics Server computer that is to be the master server. This needs to be the NetBIOS name (computer name) of the machine. Double or single quotes are not required if the value consists of only non-key, non-reserved words, or alphanumeric characters.

Example: MASTER_SERVER = SERVER03;

SERVER_POLL_SECONDS

This specifies the frequency of heartbeat messages between the cluster controller and each Siebel Analytics Server in the cluster. This parameter is required.

Valid values are 1 to 60 seconds. The default is every 5 seconds. This is the recommended value. Specify the number of seconds as a whole integer.

NOTE: Increasing the value will cause failures to be detected less rapidly. Decreasing the value may increase system overhead.

Example: `SERVER_POLL_SECONDS = 5;`

CONTROLLER_POLL_SECONDS

This specifies the frequency of heartbeat messages between the primary Cluster Controller and the secondary cluster controller (if one is defined). If no secondary cluster controller is defined, this parameter is ignored.

Valid values are 1 to 60 seconds. The default is every 5 seconds. This is the recommended value. Specify the number of seconds as a whole integer.

NOTE: Increasing the value will cause failures to be detected less rapidly. Decreasing the value may increase system overhead.

Example: `CONTROLLER_POLL_SECONDS = 5;`

MONITOR_CONTROLLER_PORT

Specifies the TCP/UDP port number to use for intracluster communication to the cluster controller. The default port is 9700. This parameter is required.

NOTE: The default port numbers in the NQClusterConfig.INI file have not been registered through the Internet Assigned Numbers Authority (IANA), nor, as of the date this document was prepared, have these ports been assigned to any specific use by IANA.

When assigning a port number, keep these considerations in mind:

- Port numbers may be in the range of 1024 to 49151.
- Before selecting a port number, verify that no installed application uses the port number on any machine in the cluster.

- When installing additional software packages, do not assign the port number used in Siebel Analytics clustering communications to other applications as either TCP or UDP ports.

NOTE: Do not specify the same port number that was specified for the `MONITOR_SERVER_PORT` (described in the following section).

Example: `MONITOR_CONTROLLER_PORT = 9700;`

MONITOR_SERVER_PORT

Specifies the TCP/UDP port number to use for intracluster communication to the clustered servers. The default port is 9701. This parameter is required.

NOTE: The default port numbers in the `NQClusterConfig.INI` file have not been reserved through the Internet Assigned Numbers Authority (IANA), nor, as of the date this document was prepared, have these ports been assigned to any specific use by IANA.

When assigning a port number, keep these considerations in mind:

- Port numbers may be in the range of 1024 to 49151.
- Before selecting a port number, verify that no installed application uses the port number on any machine in the cluster.
- When installing additional software packages, do not assign the port number used in Siebel Analytics clustering communications to other applications as either TCP or UDP ports.

NOTE: Do not specify the same port number that was specified for the `MONITOR_CONTROLLER_PORT` (described in the preceding section).

Example: `MONITOR_SERVER_PORT= 9701;`

CLIENT_SERVER_PORT

Specifies the TCP/UDP port number to use for ODBC connections on the clustered servers. The default port is 9703. This parameter is required.

NOTE: The default port numbers in the NQClusterConfig.INI file have not been reserved through the Internet Assigned Numbers Authority (IANA), nor, as of the date this document was prepared, have these ports been assigned to any specific use by IANA.

When assigning a port number, keep these considerations in mind:

- Port numbers may be in the range of 1024 to 49151.
- Before selecting a port number, verify that no installed application uses the port number on any machine in the cluster.
- When installing additional software packages, do not assign the port number used in Siebel Analytics clustering communications to other applications as either TCP or UDP ports.

NOTE: Do not specify the same port number as that specified for the CLIENT_CONTROLLER_PORT.

Example: CLIENT_SERVER_PORT= 9703;

CLIENT_CONTROLLER_PORT

Specifies the TCP/UDP port number to use for ODBC connections on the cluster controllers. The default port is 9706. This parameter is required.

NOTE: The default port numbers in the NQClusterConfig.INI file have not been reserved through the Internet Assigned Numbers Authority (IANA), nor, as of the date this document was prepared, have these ports been assigned to any specific use by IANA.

When assigning a port number, keep these considerations in mind:

- Port numbers may be in the range of 1024 to 49151.

- Before selecting a port number, verify that no installed application uses the port number on any machine in the cluster.
- When installing additional software packages, do not assign the port number used in Siebel Analytics clustering communications to other applications as either TCP or UDP ports.

NOTE: Do not specify the same port number as that specified for the CLIENT_SERVER_PORT.

Example: CLIENT_CONTROLLER_PORT = 9706;

SERVER_MANAGER_PORT

Specifies the TCP/UDP port number to use for intracluster communication. The default port is 9702. This parameter is required.

NOTE: The default port numbers in the NQClusterConfig.INI file have not been reserved through the Internet Assigned Numbers Authority (IANA), nor, as of the date this document was prepared, have these ports been assigned to any specific use by IANA.

When assigning a port number, keep these considerations in mind:

- Port numbers may be in the range of 1024 to 49151.
- Before selecting a port number, verify that no installed application uses the port number on any machine in the cluster.
- When installing additional software packages, do not assign the port number used in Siebel Analytics clustering communications to other applications as either TCP or UDP ports.

Example: SERVER_MANAGER_PORT= 9702;

NQClusterConfig.INI File Reference

Parameter and Syntax Descriptions in the Cluster Section

This appendix covers the process of customizing your Siebel Analytics application's home page and dashboards, and the Analytics subject areas relevant to your Siebel operational application.

The topics include:

- [“Customizing the Analytics Content on the Siebel Operational Application Home Page” on page 315](#)
- [“Adding Views for Custom Analytics Dashboards” on page 317](#)
- [“About Action Links to Siebel Views Containing Single Quotation Marks” on page 319](#)
- [“Analytics Subject Areas for Siebel Operational Applications” on page 320](#)

Customizing the Analytics Content on the Siebel Operational Application Home Page

Siebel Analytics applications are integrated with Siebel eBusiness applications using the symbolic URL infrastructure. The following section explains how to use symbolic URLs to link a new report to a Siebel operational application home page and how to add new Analytics Dashboards to the Siebel operational application.

NOTE: For more information on the symbolic URL infrastructure, see the *Siebel Portal Framework Guide*. This section assumes that you have successfully built a symbolic URL to link some external content, using the instructions given in *Siebel Portal Framework Guide*.

For each Analytical report on a Siebel operational application home page, there is a symbolic URL record defined that links the applet to the Analytics report. If you have not already done so, you will need to create a new Homepage applet and set it up to use a symbolic URL.

To configure a new Home Page applet to use a symbolic URL

- 1** Make sure the symbolic URL has been set up.
- 2** Launch the Siebel operational application and navigate to the Integration Administration > Symbolic URL Administration view.
- 3** Query for the symbolic URL that has been set up for Analytics.

The name of this symbolic URL should be exactly the same as the calculated value of the field that was added to the Business Component. For example, you may have a symbolic URL named HomePageAnalytics.

- 4** In the URL field, enter the Web URL:

```
http://NQHOST/Analytics/saw.dll
```

For the Host Name, choose the Analytics Server Name with the pick applet from the list. NQHOST in the URL is a virtual name that points to the Analytics Web machine. The other parameters are:

- Fixup Name: Inside Applet
- SSO Disposition: Inline
- Analytics Web application name: Select from the pick list

5 Create the appropriate symbolic URL Arguments.

These arguments will depend upon the particular Analytics report that you are trying to display. The symbolic URL arguments should be as shown in [Table 38](#).

Table 38. Symbolic URL Arguments for Reports

| Name | Registered | Type | Path Argument Value | Append | Sequence # |
|------------|------------|----------|---|--------|------------|
| Cmd | Y | Constant | Go | Y | 1 |
| Path | Y | Constant | <code>/shared/Sales/Pipeline/Overview/Top 10 Deals</code> | Y | 2 |
| Syndicate | Y | Constant | Siebel | Y | 3 |
| nQUser | Y | Command | UseSiebelLoginId | Y | 4 |
| nQPassword | Y | Command | UseSiebelLoginPassword | Y | 5 |

The Argument Values should be the same for any Analytics report you work with, except for the Path Argument Value. The Path argument tells the symbolic URL the path to the report on the Analytics Web. To determine the path to the report, log in to your Analytics Web as an Administrator. In Siebel eBusiness Applications, you can access this view through Answers > Siebel Analytics Web Administration. Select Manage Analytics Catalog, then navigate to your report. The full path for the report in our example is `/shared/Sales/Pipeline/Overview/Top 10 Deals`. Add this path name to the Symbolic URL argument.

Adding Views for Custom Analytics Dashboards

This process is similar to that of adding Siebel Analytics reports to the home page:

- First, using Siebel Tools, set up a new view.
- Then, in the operational application, define a symbolic URL for that view.

For more information on how to set up a view to use Symbolic URLs, see the *Siebel Portal Framework Guide*.

To configure the symbolic URL for Analytics dashboards

- 1** Define a Symbolic URL.
 - a** Navigate to Site Map > Integration Administration > Symbolic URL Administration.
 - b** In the Symbolic URL Administration view, add a new record.
- 2** Define Symbolic URL arguments.
 - a** Navigate to Symbolic URL Administration.
 - b** In the Symbolic URL Administration applet, select the Symbolic URL you want to configure.
 - c** In the Symbolic URL Arguments applet, enter the arguments that need to be sent to the external host.

The symbolic URL definitions are:

- Fixup Name: Default
- SSO Disposition: IFrame

NOTE: The SSO Disposition is IFrame and not Inline as in the case of the applet.

- Analytics Web application name: Select from the picklist.

The arguments to be used for the symbolic URLs are shown in [Table 39](#).

Table 39. Symbolic URL Arguments for Dashboards

| Name | Registered | Type | Value | Append | Sequence # |
|------------|------------|----------|-------------------------------------|--------|------------|
| Cmd | Y | Constant | PortalPages | Y | 1 |
| PortalPath | Y | Constant | /shared/Executive/_Portal/Executive | Y | 2 |
| nQUser | Y | Command | UseSiebelLoginId | Y | 3 |
| nQPassword | Y | Command | UseSiebelLoginPassword | Y | 4 |

Note that *cmd* argument value is different and is PortalPages now. Also, the PortalPath is the path to the Dashboard, not the path to the report. You can get the path the same way as you would get the path to the report through Siebel Analytics Web.

- 3 In Siebel Analytics, create the dashboards.

NOTE: Only a Siebel Analytics Web administrator can perform this step.

- 4 In Siebel Analytics, set up the dashboards to your requirements.

About Action Links to Siebel Views Containing Single Quotation Marks

Siebel Analytics applications contain prebuilt Action Links in reports and dashboards. Action Links are a way to navigate from a user's Analytic dashboard to a record in a Siebel operational application, such as Siebel Call Center. For example, you can drill down directly from a Siebel Sales Analytics dashboard to a specific record in a Siebel Sales view. The link is based on the row-ID column contained in a report. You can also create new Action Links for any existing report.

All of the existing examples of Action Link implementation refer to views with simple names, such as All Account List View, which are easily referenced in the parameters for the NQSWENav used to enable the link. For example, the Action Link to drill from an Account Record in Siebel Analytics to the All Account List View looks like this:

```
<a href=\"javascript:NQSWENav('All Account List View','Account
List Applet','@'); \">"@\" </a>
```

This example works when a view name does not contain any single quotation marks. However, many important Siebel views do contain quotation marks. Simply pasting the view name with the quotation mark will result in an error because the Siebel Web Engine cannot interpret the NQSWENav command:

```
<a href=\"javascript:NQSWENav('Manager's Account List
View','Account List Applet','@'); \">"@\" </a>
```

The solution to this problem is to use the escape character (or backslash) in JavaScript to reference the single quotation mark. For any single quotation mark, insert two back slashes before the quote, and the Siebel Web Engine will be able to process the request correctly:

```
<a href=\"javascript:NQSWENav('Manager\\\'s Account List View','Account List Applet','@');\">\"@\" </a>
```

Analytics Subject Areas for Siebel Operational Applications

This section contains [Table 40](#), showing the relevant Analytics subject areas for Siebel operational applications (Siebel eBusiness Applications and Siebel Industry Applications).

Table 40. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|------------------------|------------------------|
| Incentive Compensation | Incentive Comp |
| Automotive | Service Requests |
| | Vehicle Sales |
| Communications | Customer Satisfaction |
| | Customers |
| | Orders |
| | Products |
| | Service Requests |
| Consumer Sector | Consumer Sector |
| Enterprise Visibility | Enterprise Visibility |

Table 40. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|-----------------------|-------------------------------|
| Workforce Analytics | Service Requests |
| | Workforce Performance |
| | Workforce Summary |
| | Workforce Training |
| Executive Analytics | Campaigns |
| | Customer Satisfaction |
| | Forecasting |
| | Orders |
| | Partners |
| | Pipeline |
| | Products |
| | Service Requests |
| | Workforce Performance |
| | Workforce Summary |
| | Workforce Training |

Table 40. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|-----------------------------|-------------------------------------|
| Financial Services | Activities |
| | Campaigns |
| | Consumers |
| | Customer Satisfaction |
| | Customers |
| | Financial Accounts and applications |
| | Insurance Claims |
| | Insurance Policies |
| | Pipeline |
| | Service Requests |
| Product Sales Effectiveness | Agreement Details |
| | Agreement Overview |
| | Consumers |
| | Customer Satisfaction |
| | Orders |
| | Pricing |
| | Products |
| | Quotes |
| | Service Requests |
| Marketing Analytics | Campaigns |
| | Consumers |
| | Customers |

Table 40. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|-----------------------|--|
| Partner Analytics | Activities |
| | Campaigns |
| | Customer Satisfaction |
| | Customers |
| | Orders |
| | Partner Training |
| | Partners |
| | Pipeline |
| | Service Requests |
| Pharmaceuticals | Pharma Medical Education Effectiveness |
| | Pharma Objective Achievement |
| | Pharma Promotional Effectiveness |
| | Pharma Sales Effectiveness |
| | Rx Sales |
| Sales Analytics | Customers |
| | Forecasting |
| | Orders |
| | Pipeline |
| | Products |
| | Activities |
| | Agreement Details |
| | Agreement Overview |

Table 40. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|-----------------------|----------------------------------|
| Service Analytics | Assets |
| | Consumers |
| | Customer Satisfaction |
| | eMail Response |
| | Orders |
| | Service Requests |
| | UQ Alarms |
| | UQ Employee Work Item Statistics |
| | UQ Route and Channel Statistics |

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