Siebel Analytics Installation and Configuration Guide

Version 7.7.1 Rev. F
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1 What's New in This Release

What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1 Rev. F

Table 1 on page 13 lists changes in this version of the documentation to support all 7.7.1 releases of the software.

NOTE: This version of the guide applies to the 7.7.1 release of Siebel Analytics and Siebel Data Warehouse. Siebel Analytics 7.7.1 is compatible with Siebel 7.7 operational applications.

Table 1. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1 Rev. F

Topic	Description
"Siebel Analytics Deployment Diagram" on page 32	Updated to show data sources in the same configuration diagram as the servers.
"Related Siebel Analytics Documentation" on page 30	■ Added a list of related documentation. ■ Added a procedure for how to access Technical Documentation on Siebel SupportWeb.
"Downloading Siebel Analytics Installation Files" on page 80	Rewrote the procedure to clarify the handling of files under UNIX.
"Creating a WebARchive (WAR) File for Siebel Analytics Web" on page 127	Updated settings for configuring a Web server under UNIX.
"Default Settings for Siebel Analytics Server Configuration Files" on page 140	Added a table showing the default Siebel Analytics Server settings after installation. This is the same information as Appendix A, "NQSConfig.INI File Reference," but in a different form.

Table 2 on page 14 lists changes described in the 7.7.1, Rev. E, version of the documentation to support release 7.7.1.5 of the software.

Table 2. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1 Rev. E

Topic	Description
IUSR_ account permission settings "Checking Permissions Settings for Windows Installation Folders" on page 52	The account IUSR_ (or in general HTTP server user) needs read-only access to the Web applications and data directories.
Running multiple instances of Siebel Analytics Chapter 9, "Administering Analytics Servers"	Added a Caution that multiple instances of Siebel Analytics cannot be run on the same machine.
Upgrading Siebel Analytics platform "Upgrading the Siebel Analytics Platform With an Older Repository" on page 41	Upgrade the Siebel Analytics platform only if there is a requirement not to upgrade the Analytics applications.
Using Sun ONE as a Web server "Creating a New Virtual Server on Sun ONE" on page 128	If you are using Sun ONE as your Web server, the Java options need to be set correctly, especially if Sun ONE is using an old Java version. Added text to explain how to set the Java options.
CASE_SENSITIVE_CHARACTER_ COMPARISON parameter "Parameters in the Configuration File General Section" on page 294	The CASE_SENSITIVE_CHARACTER_COMPARISON parameter affects all comparisons that occur within the Siebel Analytics Server. This setting should be set to correspond with how the back-end database deals with case; otherwise, some subtle problems can result. Added text about this parameter.
Creating Lists of Values "Adding Lists of Values for Siebel Analytics Metadata" on page 185	When using Siebel Analytics with Siebel operational applications in a localized deployment, you must create lists of values for translation strings. Amended the procedure to show this.
Using Action Links with a virtual IP address "Process of Configuring Siebel Analytics with Siebel Web Extension (SWE)" on page 208	Added a Caution that when Analytics Web Server and Siebel Web Server are installed on different machines and are using load balancing software to create a virtual IP address, the Action Links feature works only if you log onto a virtual Web browser.

Table 3 on page 15 lists changes described in the 7.7.1, Rev. D, version of the documentation to support release 7.7.1.4 of the software.

Table 3. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1, Rev. D

Topic	Description
Siebel Analytics Deployment Diagram on page 32	Added a diagram showing configurations for Stand-Alone and Integrated Siebel Analytics.
Added the following chapter ■ Siebel Analytics Installation Options on page 23 Reorganized material into new chapters ■ Preparing Windows Environment for Installing Siebel Analytics on page 35 ■ Configuring Siebel Analytics in the Windows Environment on page 51 ■ Preparing UNIX Environment for Installing Siebel Analytics on page 75 ■ Configuring Siebel Analytics in the UNIX Environment on page 103 ■ Administering Siebel Analytics Servers on page 143	■ This chapter explains the different ways the Siebel Analytics product is licensed and installed. ■ These chapters contain topics that were formerly in the chapters on installation under Windows and under UNIX. Now there are separate chapters for setup, installation, and configuration processes. The configuration chapters have been organized around the three servers: ■ Siebel Analytics Server ■ Siebel Analytics Web Server ■ Siebel Analytics Scheduler Server
Siebel Analytics Web and HTTP Web services "Configuring the ISAPI Plug-In for Siebel Analytics Web" on page 61	The ability to separate the Analytics Web ISAPI plug-in and the Analytics Web service onto different machines provides control over network and resource allocation and partitioning while using firewalls.
UNIX platform issues ■ "Siebel Analytics Components Supported Under UNIX" on page 76 ■ "Localizing Sort Order Settings (UNIX)" on page 120	■ Siebel Analytics Scheduler scripts and iBots are supported only under Windows platforms ■ This topic has been moved from Appendix A, in order to correctly configure sort order settings under UNIX.

Table 3. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1, Rev. D

Topic	Description
Siebel Analytics Web configuration	
■ "Editing the web-apps.xml File on Sun ONE" on page 129	■ The procedure for editing the web-apps.xml file has been amplified so the configurator knows where in the file to make changes.
■ "Granting the Analytics Log On as a Service Right (Windows)" on page 166	■ "Log on as a Service Right" does not apply to Siebel Analytics Web server in a cluster install ■ Siebel Analytics Web is not clustered except when the Web Catalog is read-only.
Data configuration issues	
■ "Importing Siebel Industry Applications Seed Data" on page 202	■ Siebel Analytics seed data does not install with Siebel Industry Applications and must be imported into your database after the Siebel Analytics installation. This procedure has been corrected.
■ "Configuring Teradata Data Source for Analytics (UNIX)" on page 116	■ This added task is required only for Siebel Analytics applications running under UNIX platforms, if Teradata is to be configured as the only data source of Siebel Server.
Upgrade issues "Reapplying Customized Style Sheets" on page 207	Because of many changes to styles and style sheets in Siebel Analytics 7.7, added this topic about reviewing and resetting customizations to deployments.
Siebel Analytics Deployment Diagram on page 32	Added these diagrams, showing configurations for Stand-Alone and Integrated Siebel Analytics.

Table 4 on page 17 lists changes described in the 7.7.1, Rev. C, version of the documentation to support release 7.7.1 of the software.

Table 4. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1, Rev. C

Topic	Description
Image server installation location ■ "Uninstalling or Upgrading Siebel Analytics (Windows)" on page 39 ■ "Configuring Analytics on a Web Server Machine (Windows)" on page 69 ■ "Troubleshooting the Siebel Analytics Installation (UNIX)" on page 136 ■ "Converting Chart Fonts for Analytics Web Charts" on page 177	Added notes about changes to the location and contents of the Corda PopChart Image Server for this release. (The notes are in each of the topics listed.)
Troubleshooting image server problems (Windows) "Troubleshooting the Siebel Analytics Installation (Windows)" on page 49	Added procedures to troubleshoot the Corda PopChart Image Server installation. One type of problem may be due to incorrect license key being used. Another problem may be due to connectivity settings being incorrect, the image server being run as a service, or the port being unavailable.
Troubleshooting Siebel Analytics Web logon problems (UNIX) "Troubleshooting the Siebel Analytics Installation (UNIX)" on page 136	Added procedures to troubleshoot errors sometimes encountered when logging on to Siebel Analytics Web. The errors are due to configuration of the user database and the Siebel Analytics Server services.
Cluster server configuration "Granting the Analytics Log On as a Service Right (Windows)" on page 166	This procedure for the Windows XP platform has been added to the one already provided for the Windows 2000 platform.
Localization session variable "The WEBLANGUAGE Session Variable" on page 191	If you are localizing your Siebel Analytics deployment, this topic explains how a session variable is set up to allow externalized metadata strings.
Localization for Siebel Miner and Data Mining Workbench "Displaying Localized Column Field Names in Siebel Miner or Data Mining Workbench" on page 189	Added steps to localize a deployment of Siebel Miner.

Table 4. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1, Rev. C

Topic	Description
Siebel Pharma application and Pharma Field Analytics Client integration ■ "Integrating the Pharma Application Home Page with the Pharma Field Analytics Client" on page 221 ■ "Importing Pharma Application Target Lists to the Pharma Field Analytics Client" on page 222	■ Added this procedure to integrate the Siebel Pharma application home page with the Field Analytics Client (Disconnected Client). ■ Added this procedure to integrate the Siebel Pharma application target list functionality with the Field Analytics Client (Disconnected Client).
Parameters in the Configuration File Server Section: ■ "MAX_QUERY_PLAN_CACHE_ENTRIES" on page 305 ■ "MAX_DRILLDOWN_INFO_CACHE_ENTRIES" on page 305 ■ "MAX_DRILLDOWN_QUERY_CACHE_ENTRIES" on page 305	Changed the default values for the MAX_...CACHE_ENTRIES parameters and added a note about not casually changing these defaults.

Table 5 on page 18 lists changes described in the 7.7.1, Rev. B, version of the documentation to support release 7.7.1 of the software.

Table 5. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1, Rev. B

Topic	Description
Siebel Data Mining Engine ■ "About the Siebel Analytics Installation Wizard on Windows" ■ "Running the Siebel Analytics Installation Wizard (Windows)" on page 44	The option to install the Data Mining Engine is available under the Custom installation setup.
DAC licensing ■ "About the Siebel Data Warehouse and the Data Warehouse Application Console" ■ "Installing Siebel Data Warehouse Only on UNIX"	DAC is now licensed separately, and instructions on how to install the license under UNIX have been added.

Table 5. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1, Rev. B

Topic	Description
Authentication See "LDAP and ADSI Authentication in Siebel Analytics" on page 157	Siebel Analytics supports both LDAP and ADSI for user and group authentication. However, importing of users and groups into the repository is supported on regular LDAP servers only, but not on ADSI servers.
Using IKeyMan to create CMS key database files See "Generating a CMS Key Database File" on page 155	To support LDAP authentication over Secure Sockets Layer, GSKit uses a Java-based tool, IBM's IKeyMan Version 6.0, to create key database files. A procedure has been added to allow IKeyMan 6.0 to generate valid certificates.
Changing the default currency in Siebel Analytics applications See "Changing the Default Currency in Analytics Applications" on page 181	Added a procedure to display the default currency symbol correctly for a particular localized Analytics application.
Integrating Siebel Analytics and Siebel operational applications ■ Chapter 13, "Configuring the Siebel Analytics Application Repository" ■ Chapter 14, "Integrating Analytics Dashboards and Operational Applications Data"	These topics have been reorganized to make a clearer distinction between tasks required for the Analytics application repository and tasks required to integrate Analytics dashboards with the Siebel operational application.
Position-based hierarchies in Life Sciences reports See "Life Sciences Analytics Security Settings" on page 254	In this release, all report columns use position-based hierarchies, where in earlier releases, report columns used alignment-based sales hierarchies. If you want to continue to use brick-based position hierarchies, you must reconfigure the reports to maintain the alternate hierarchy.

Table 6 on page 19 lists changes described in the 7.7.1, Rev. A, version of the documentation to support release 7.7.1 of the software.

Table 6. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1, Rev. A

Topic	Description
Siebel Data Mining Engine ■ "About the Siebel Analytics Installation Wizard on Windows" ■ "Running the Siebel Analytics Installation Wizard Under Windows"	The installer for Windows now includes an option to install the Data Mining Engine.

Table 6. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1, Rev. A

Topic	Description
"Configuring Pharma Field Analytics Client ODBC DSN" on page 283	Added this procedure. Connectivity to a local transactional database is not automatically supported, so an administrator must create a new DSN to connect to a laptop's local database and modify the local .rpd to use the new DSN.
■ "Configuring Oracle Databases for the Siebel Analytics Server Machine" on page 71 ■ "Setting Oracle Databases for the Siebel Analytics Server Machine" on page 114	Added a procedure to configure Siebel Analytics installations with Oracle databases.
"Changing Configuration File Settings for Japanese Localizations on AIX" on page 176	Added a procedure for configuring some Japanese localizations of Siebel Analytics on AIX platforms.
"Checking the Execution Order of Initialization Blocks" on page 184	Added a procedure for checking the initialization block LOCALE for localized Siebel Analytics in integrated environments.
"Configuring the Browser Settings for Siebel Analytics Operational Applications"	Added a procedure to change browser settings when Siebel Analytics Server URLs are from different domains.
"Process of Customizing Analytics Application Home Page and Dashboards" on page 215	The procedures for customizing the home page or reports, formerly in Appendix C, have been incorporated into this process description.
"Configuring ODBC Data Source for Analytics (UNIX)" on page 116	Added a procedure for configuring NQSODBC as the only Siebel Server data source.
Usage Accelerator ■ "Responsibilities and Access in Analytics Applications" on page 226 ■ "Usage Accelerator Analytics Security Settings" on page 257 ■ "Metadata Requirements for Usage Accelerator Application" on page 252	Usage Accelerator allows you to track user adoption of Siebel Sales using effectiveness metrics across four categories. The preconfigured responsibilities, security settings, and metadata requirements for Usage Accelerator were added.
Siebel Finance Analytics ■ "Updating Finance Analytics Logical Table Sources" on page 260 ■ "Disabling the Finance Analytics Logical Table Sources" on page 263	Finance Analytics repository and metadata require different configurations from the other Siebel Industry Analytics applications.

Table 7 on page 21 lists changes described in the 7.7.1 version of the documentation to support release 7.7.1 of the software.

Table 7. What's New in Siebel Analytics Installation and Configuration Guide, Version 7.7.1

Topic	Description
"Installing and Configuring the Web Server Process" on page 82	The Siebel Analytics Web server and the Web (or HTTP) server are now different processes. Added the tasks involved for each type of Web server.
"Running Disconnected Client in Silent Mode" on page 283	Added the tasks for enabling silent mode in Disconnected Client applications, primarily Disconnected Pharma Field Analytics. Silent mode allows Disconnected Analytics to run in the background.
"Completing the Initialization in the Siebel Operational Application" on page 205	Modified the NQSHost setup topic to include the Port setting required for Disconnected Analytics.

2 Siebel Analytics Installation Options

Siebel Analytics Installation and Configuration Guide provides information on installing and configuring all components of Siebel Analytics on all approved platforms, product configurations, and deployments.

NOTE: This version of the guide applies to the 7.7.1 release of Siebel Analytics and Siebel Data Warehouse. Siebel Analytics 7.7.1 is compatible with Siebel 7.7 operational applications.

This chapter provides you with the information you need to begin the process of installing Siebel Analytics. The main topics of this chapter are the following:

- "Purpose of the Siebel Analytics Installation and Configuration Guide" on page 24
- "Siebel Analytics Installation and Licensing Options" on page 25
- "Related Siebel Analytics Documentation" on page 30
- "Siebel Analytics Deployment Diagram" on page 32

Purpose of the *Siebel Analytics Installation and Configuration Guide*

The processes covered in this book are shown in Table 8 on page 24.

Table 8. Processes Described in *Siebel Analytics Installation and Configuration Guide*

Process
Setting up your operating system for your Siebel Analytics deployment
Running the Siebel Analytics installation wizard
Configuring the various Siebel Analytics servers for your specific deployment
General Siebel Analytics server administration tasks that depend on your operating system
Special configuration topics, such as security and localization

The processes *not* covered in this book are shown in Table 9 on page 24.

Table 9. Processes Not Described in *Siebel Analytics Installation and Configuration Guide*

Process
Configuring the Siebel Analytics repository and Siebel Analytics Web catalog See the *Siebel Analytics Server Administration Guide* See the *Siebel Analytics Web Administration Guide*.
Configuring and administering the Siebel Data Warehouse See the *Siebel Data Warehouse Installation and Administration Guide*.

TIP: A list of all the books you may need for a full enterprise installation is shown in "Related Siebel Analytics Documentation" on page 30.

Siebel Analytics Installation and Licensing Options

Your particular deployment of Siebel Analytics depends on several related product licensing and major deployment considerations, as described in the following topics:

- "Product Licensing Options for Siebel Analytics" on page 26
- "License Key Information for Windows" on page 26
- "Notes on Your Installer Choices" on page 28
- "How Analytics Applications Licensing Affects Repository Size" on page 29
- "Siebel Analytics Server Licensing Required By Other Siebel Programs" on page 29

TIP: When you are finished with this chapter, proceed to Chapter 3, "Preparing Windows Environment for Installing Siebel Analytics," or Chapter 6, "Preparing UNIX Environment for Installing Siebel Analytics."

Product Licensing Options for Siebel Analytics

Siebel Analytics includes two installer programs. Your choice of installer depends on the product you have licensed. Siebel Analytics is licensed as two products:

- Siebel Analytics platform (Stand-Alone)

  The stand-alone product includes 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.

- Siebel Analytics applications (Integrated)

  Siebel Analytics applications can be configured to run with Siebel operational applications, using the Siebel Data Warehouse or prebuilt (and sometimes specialized) data warehouses. (The Siebel Data Warehouse is also referred to as the Siebel Relationship Management Warehouse (RMW).)

License Key Information for Windows

Before beginning any installation, you should determine which of the installation components are allowed by your Siebel Analytics licenses, and the values for each of the installation options.

Table 10 shows the Siebel Analytics components that are installed with each installation option.

"Notes on Your Installer Choices" on page 28 describes how the installer limits the options you may choose from.

Table 10. Siebel Analytics Installation Wizard Options for Windows

Installation Option	Platform Components Installed	Additional Components Installed
Complete	■ All the following components	All the following components
Siebel Analytics Server	■ Siebel Analytics Server ■ Siebel Analytics Clustering Server ■ Siebel Analytics Scheduler ■ Siebel Analytics Server Administration Tool	■ Seed data ■ Seed file programs (dataimp.exe)
Siebel Analytics Web Server (Also referred to as the Siebel Analytics Presentation Server)	■ Siebel Analytics Web ■ Siebel Analytics Web Proxy ■ Siebel Analytics Catalog Manager ■ Corda PopChart Image Server	SiebelAnalytics.webcat

Table 10. Siebel Analytics Installation Wizard Options for Windows

Installation Option	Platform Components Installed	Additional Components Installed
Siebel Analytics Client Tools **NOTE:** The ODBC driver can be installed by itself.	■ Siebel Analytics Client (nqcmd.exe and nqclient.exe) ■ Siebel Analytics ODBC Driver ■ Siebel Analytics Catalog Manager ■ Siebel Analytics Server Administration Tool	**NOTE:** Analytics applications only install SiebelAnalytics.rpd also.
Disconnected Client (Mobile Client)	This option appears only if you have a license for Disconnected Analytics. **NOTE:** For Siebel Pharma applications, Disconnected application components are installed on the Siebel Analytics Server. ■ Local version of the Siebel Analytics Server ■ Siebel Disconnected Analytics Application Manager ■ Siebel Disconnected Analytics Client ■ Siebel Disconnected Analytics Web	This option appears only if you have a license for Disconnected Analytics. None.
Data Mining Engine for Real-Time Scoring	**NOTE:** This option appears only if you have a license for Analytics Data Mining Engine. Data Mining Engine	None.
Data Warehouse	**NOTE:** Analytics applications only. ■ Siebel Data Warehouse ■ Data Warehouse Application Console Server ■ Data Warehouse Application Console (DAC) Client	Not applicable for the Stand-Alone version of Siebel Analytics. ■ 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. Table 11 on page 28 provides these details.

NOTE: Not all components can be deployed on all platforms. For specific platform support information, see *Siebel System Requirements and Supported Platforms*, located on the SupportWeb Knowledge Base. To download the Siebel System Requirements and Supported Platforms document, see the procedure under "Related Siebel Analytics Documentation" on page 30.

Table 11. Installer Restrictions Based on Licensing

Options	Notes
Siebel Analytics applications; Siebel Data Warehouse	For a particular Siebel Analytics application, the Siebel Analytics repository (.rpd) file is generated based on the license keys for that application. For more information about application licensing, see "How Analytics Applications Licensing Affects Repository Size" on page 29.
Siebel Data Warehouse only	If you are choosing to install *only* the Siebel Data Warehouse, see "Configuring the Siebel Data Warehouse and the Data Warehouse Application Console" on page 72 and *Siebel Data Warehouse Installation and Administration Guide*.
Siebel Analytics Cluster Server	If you plan to install the Siebel Analytics Cluster Server feature, first read Chapter 11, "Installing and Configuring Clustered Siebel Analytics Servers."
Siebel Analytics Disconnected Client	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 17, "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*.
Siebel Data Mining Engine	■ If you plan to install Data Mining Engine for Real-Time Scoring, see *Data Mining Deployment Guide*. ■ The installation choice for Data Mining Engine is under the Custom Setup type.

How Analytics Applications Licensing Affects Repository Size

If you have purchased a Siebel Analytics application, the license keys for that application generate the Siebel Analytics repository (.rpd) file. For example, if you did not license Siebel Delivers, this product is not installed. Siebel Analytics licensing may significantly affect the repository file size, depending on the specific Siebel Analytics application that you purchased. For example, if you have licensed Siebel Sales Analytics, you are able to view and use only those Siebel Analytics dashboards, subject areas, and reports related to Sales Analytics.

However, licensing does not affect the size of the Analytics Web Catalog. It is recommended as a best practice 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 folder `/shared/Marketing`.

Siebel Analytics Server Licensing Required By Other Siebel Programs

Your license agreement with Siebel describes the scope of your program license and therefore your permitted use of the Siebel Analytics Server. Some of the functions of the Siebel Analytics Server described in this document may be outside the scope of, or not applicable to, your specific program license. The Siebel programs shown in Table 12 on page 29 require installation and use of the Siebel Analytics Server.

Table 12. Programs Requiring Installation and Use of Siebel Analytics Server

Siebel Program
Siebel Analytics Platform Server–CRM Edition
Siebel Marketing Server–CRM Edition
Siebel Marketing Server–Enterprise Edition
Siebel Usage Accelerator Platform Server

Related Siebel Analytics Documentation

Books that are cross-referenced from this document are listed in Table 13 on page 30.

Table 13. Related Siebel Analytics Documentation

Document Title
Siebel Analytics Server Administration Guide
Siebel Analytics Web Administration Guide
Siebel Analytics Scheduler Guide
Security Guide for Siebel eBusiness Applications
Siebel Portal Framework Guide
Siebel Analytics User Guide
Global Deployment Guide
Data Mining Deployment Guide
Siebel Data Warehouse Installation and Administration Guide
Siebel Disconnected Analytics Online Help
Siebel Data Warehouse Data Model Reference
Siebel Tools Online Help

These books are available on Siebel SupportWeb Knowledge Base. The following procedure explains how to access Siebel documentation.

To access Siebel Analytics 7.7.1 documentation

1. Log onto SupportWeb.
2. In the Self Service area, click the link *Browse/Search Knowledge Base (English)*.
3. In the left browser pane, click the link *Product Documentation*.
4. Under Product Documentation, click the *Siebel Bookshelf* link.
5. In the Siebel eBusiness and Industry Applications area, click the Siebel 7.7 Bookshelf, and then the All Product Lines links.

In addition, third-party documentation, such as that for Informatica, is provided on the Siebel Business Third-Party Bookshelf CD-ROM (shipped with the Siebel Bookshelf CD-ROM).

Accessing Siebel Analytics System Requirements Documentation

The search path for *Siebel System Requirements and Supported Platforms* is different from the path to Siebel Analytics 7.7.1 documentation. Use the following procedure to locate it.

To access Siebel Analytics System Requirements documentation

1. Log onto SupportWeb.
2. In the Self Service area, click the link *Browse/Search Knowledge Base (English)*.
3. In the left browser pane, click the link *Product Documentation*.
4. Under Product Documentation, click the link *Siebel System Requirements and Supported Platforms*.
5. In the Siebel Business Analytics area, click the version you want (7.7.1 or 7.7).

Siebel Analytics Deployment Diagram

Figure 1 on page 33 shows all the critical product components of Siebel Analytics and the connecting elements for a deployment integrated with Siebel CRM and Siebel Data Warehouse.

The meaning of the colors, lines, and typefaces used in this diagram are shown in Table 14 on page 32.

NOTE: The diagram assumes no unusual configuration requirements. Your own deployment may be different.

Table 14. Key to Siebel Analytics Integrated Deployment Diagram

Color	Symbol	Meaning
Green	(Area)	Siebel Analytics platform components.
	White box, green-dashed border	Third-party product licensed as part of the Siebel Analytics product.
Grey	(Area)	HTTP components. Green boxes in the grey HTTP area indicate Web components that are part of Siebel Analytics.
Blue	(Area) **NOTE:** The components within the blue and pink areas are *not* included with a Siebel Analytics Stand-Alone deployment.	Siebel operational application components. **NOTE:** This area is oversimplified and shows only those components that connect to the data source components and to Siebel Analytics.
Pink	(Area)	Data source components for Siebel Analytics. The adjoining white area indicates non-Siebel data sources.
	Green box, maroon border	Siebel Data Warehouse or DAC component.
	White box, maroon-dashed border	Third-party product licensed as part of the Siebel Data Warehouse product.
Black	Line	A connection between components. The connection is two ways unless the line terminates in an arrow (see Arrow).
	Arrow	A one-way connection.
Blue	Italicized name	Name of the protocol used for the connection.
	Italicized number	Port number for the connection, if defined.

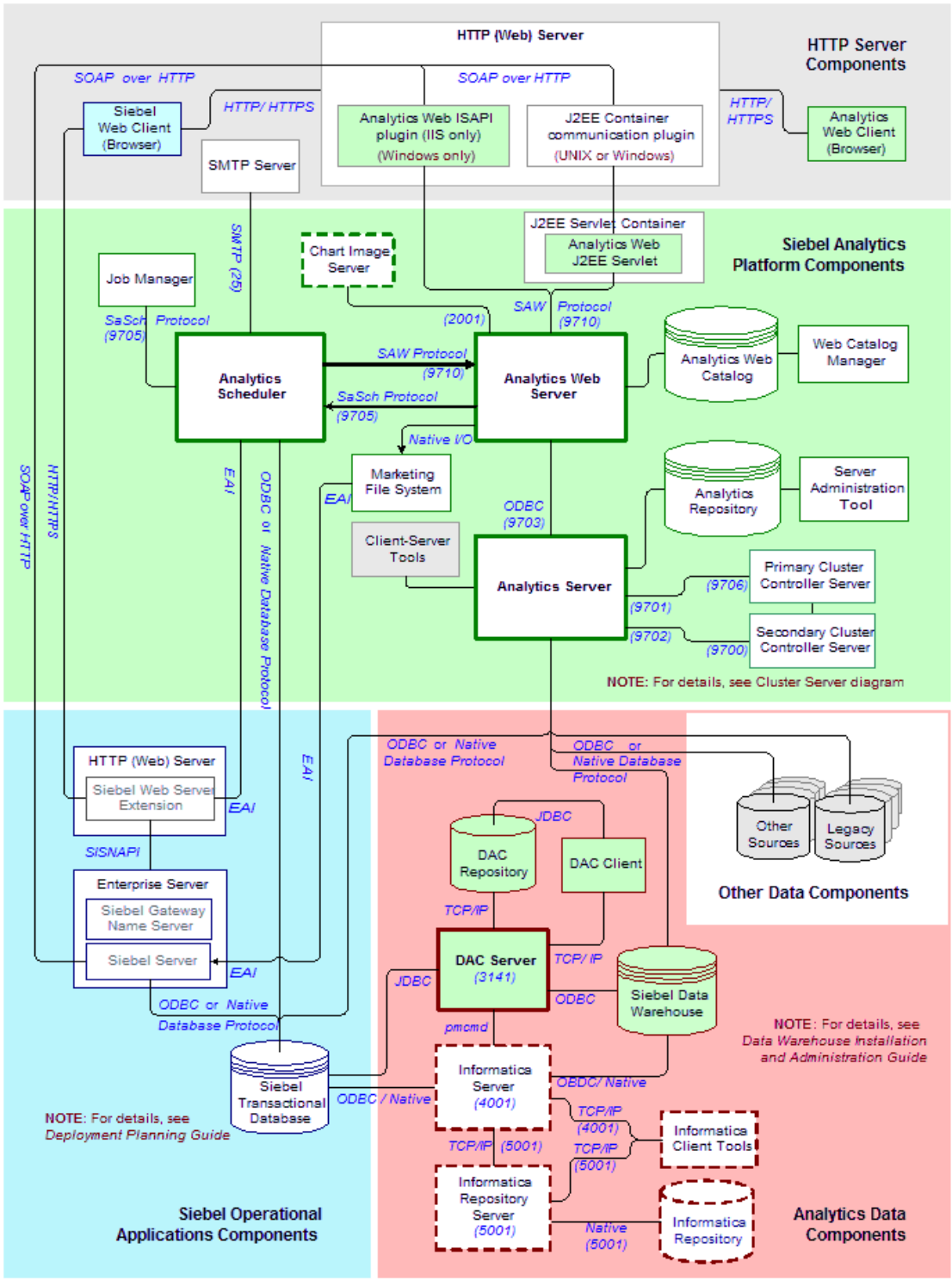

Figure 1. Overview Diagram of Integrated Siebel Analytics Deployment

3 Preparing Windows Environment for Installing Siebel Analytics

This chapter describes the steps to prepare the Windows environment, and background information you need to know, before you run the Siebel Analytics installer.

NOTE: The Siebel Analytics Installation Wizard runs under Windows systems only. The third-party Informatica installer also runs under Windows systems only. Administrators of UNIX-based systems must read the following paragraph.

Although Chapter 6, "Preparing UNIX Environment for Installing Siebel Analytics" describes the setup in the UNIX environment, administrators must use this chapter also, because UNIX systems must have some Windows-based components installed, such as the Server Administration Tool, Siebel Analytics Catalog Manager, and Data Warehouse Application Console (DAC) client.

This chapter is organized into the following tasks:

- "Setup Requirements for Analytics Applications Installation" on page 35
- "Installing a Web Server for Siebel Analytics Web (Windows)" on page 36
- "Third-Party Software Setup Under Windows Platforms" on page 36
  - "Configuring Internet Information Server (IIS) for Siebel Analytics" on page 36
  - "Installing the Microsoft Data Access Components (MDAC)" on page 37
- "Uninstalling or Upgrading Siebel Analytics (Windows)" on page 39
- "Upgrading the Siebel Analytics Platform With an Older Repository" on page 41

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

CAUTION: Make sure you have uninstalled any previous installations of Siebel Analytics.

Setup Requirements for Analytics Applications Installation

Before you install Siebel Analytics applications, you should have completed the following component installations:

- The Siebel operational application

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

- 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*.

Installing a Web Server for Siebel Analytics Web (Windows)

You must install a Web server *before* you install Siebel Analytics Web.

- If the desired Web server is IIS, see "Configuring Internet Information Server (IIS) for Siebel Analytics" on page 36.
- If the desired Web server is Apache Tomcat, see "Process of Configuring Apache Tomcat Web Server (Windows)" on page 59.

Third-Party Software Setup Under Windows Platforms

Depending on the details of your particular deployment, the following topics cover tasks that may need to be performed before you run the Siebel Analytics installer:

- "Configuring Internet Information Server (IIS) for Siebel Analytics" on page 36

  Use this procedure to add or change IIS components.

- "Installing the Microsoft Data Access Components (MDAC)" on page 37

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

Configuring Internet Information Server (IIS) for Siebel Analytics

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

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 on Windows

1. Start Microsoft Management Console.

   Use the command C:\WINDOWS\system32\compmgmt.msc.

2. From the Microsoft Management Console tree (left panel), expand Services and Applications.

   a. In the console tree, expand Internet Information Services.

   b. In the console tree, expand Web Sites.

3. Select the Default Web Site icon. Right-click and choose New > Virtual Directory.

4. 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.

5 Use the Browse button to navigate to the directory in which the Siebel Analytics Web components are installed.

NOTE: The Analytics Web directory is typically $INSTALLDIR\Web\Apps.

6 Select the following options, then click Finish:

- Allow Read Access
- Allow Script Access
- Allow Execute Access

7 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 topic "Checking Permissions Settings for Windows Installation Folders" on page 52.

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.

8 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 with IIS preinstalled typically do not meet this condition. Because this *IUSR_machinename* is created during the IIS installation process, the administrator may need 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) under 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, MDAC is not required on machines that host only Cluster Controllers.

NOTE: If you do not need to install MDAC, continue to the next topic: Installing a Web Server for Siebel Analytics Web.

Checking For an Existing Installation of MDAC

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* on Siebel SupportWeb.

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 procedure shown in "Installing MDAC" on page 38.

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

Installing MDAC

If MDAC is not installed, install MDAC using the following procedure.

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 MDAC type that conforms with the type specified in *Siebel System Requirements and Supported Platforms*.

   Click Download.

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

   This starts the MDAC installer.

4. Follow the prompts to complete the MDAC installation.

Uninstalling or Upgrading Siebel Analytics (Windows)

You may be required to reinstall Siebel Analytics, or to install or upgrade to a newer version of Siebel Analytics software. Before you install or upgrade, however, you must first uninstall your currently-installed version before proceeding with the installation or upgrade. This topic describes how to uninstall an earlier installed version of Siebel Analytics.

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

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

  NOTE: The DBFeatures.INI, NQSConfig.INI, and NQClusterConfig.INI files for Windows are located at $INSTALLDIR\Config. The Deliveries folder is on the Analytics Web Server machine. The instanceconfig.xml file for Windows is located at $INSTALLDIRData\Web\config.
- If you are upgrading the software, the newer version does 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.
- The Siebel Analytics Web Catalog stores the application dashboards and report definitions and contains information regarding permissions and accessibility of the dashboards by groups. If you are upgrading a Siebel Analytics Web Catalog from an earlier version, see *Siebel Analytics Web Administration Guide* before installing Siebel Analytics.
- If you are upgrading the software, the newer version has different style sheets (.css files) from earlier versions of Siebel Analytics. It is recommended that you follow the procedure in "Reapplying Customized Style Sheets" on page 207.

To uninstall an existing installation of Siebel Analytics under Windows

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 Windows Add or Remove Programs utility, uninstall Siebel Analytics.

You are 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.

About Uninstalling the Image Server

If you uninstall Siebel Analytics, you also uninstall the chart image server product. However, not all of the image server files are removed, and the directory structure is left behind. These must be uninstalled separately.

NOTE: When uninstalling Siebel Analytics, manually delete the remaining image server files and directories. Do not use the Windows Add or Remove Programs utility.

The following changes from Siebel Analytics version 7.5 should be noted:

- The location, structure, and content of the chart image server directory have changed.

  The image server is now installed in the main installation directory.
- The file key.txt is no longer required.

Upgrading the Siebel Analytics Platform With an Older Repository

You can upgrade to a newer version of the Siebel Analytics platform (Siebel Analytics Server and Siebel Analytics Web Server), while keeping your current version of the Siebel Analytics Web Catalog and repository and current Siebel operational application with its existing repository and schema. Upgrade only the Siebel Analytics platform components (Siebel Analytics Server and Analytics Web Server) to the later version. The Siebel Analytics Web Catalog and repository remain that of the earlier version.

The steps to perform a platform upgrade are shown in this section. For a discussion of the best way to perform the upgrade, see "Upgrading Siebel Analytics Platform for Integrated Applications" on page 42.

To upgrade Siebel Analytics Platform only

1. Back up the Siebel Analytics repository, Web catalog, NQSConfig.INI and license files.

   NOTE: If either the instanceconfig.xml file or Analytics Windows registry strings have been customized, these should be backed up for comparison to the new installation's instanceconfig.xml file or Analytics Windows registry strings. If the customizations are still viable in the new release, they should be applied accordingly.

2. Install the Siebel Analytics software for the desired upgrade version.
3. Copy the files backed up in Step 1 on page 41 back to the appropriate directories.
4. For integrated deployments that use Siebel Analytics through the Siebel Business Application, such as Siebel Marketing, perform the following additional steps:
   a. Navigate to Site Map > Integration Administration > Symbolic URL Administration
   b. Query for *NQHOST* in the URL field.
   c. For all records, select Change Records from the menu and change the URL field from

      ```
      http://NQHOST/nquireweb/nqwebapi.dll
      ```

      to

      ```
      http://NQHOST/analytics/saw.dll
      ```

Upgrading Siebel Analytics Platform for Integrated Applications

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 versions of Siebel Analytics and the Siebel operational application do not have to match.

The overall approach to use is the following:

- Upgrade your Siebel Analytics Server and Analytics Web Server to the Siebel Analytics platform version 7.7.
- Use the Siebel Analytics version 7.5 repository with the Siebel Analytics version 7.7 environment.

  CAUTION: Do not use the repository from a later version of Siebel Analytics with the repository from an earlier version Siebel operational application. This may cause unpredictable behavior.

  The Siebel operational application cannot use repository files that are in a higher release format. When the Siebel Analytics Administration Tool opens a repository (.rpd) file, it converts the file to its release format. Once this repository is converted, it cannot be opened again in the earlier version Siebel Analytics Administration Tool.

For example, in an integrated environment, the following mixture of versions is possible:

Component	Version
Siebel Analytics Repository, Web Catalog	7.5
Siebel Data Warehouse Schema	7.5
Siebel Operational Application	7.5
Siebel Analytics Platform—Analytics Server and Web Server	7.7

For details on upgrading the Siebel Data Warehouse, see *Siebel Data Warehouse Installation and Administration Guide*.

4 Installing Siebel Analytics Under Windows

This chapter describes the process of running the Siebel Analytics installer wizard in the Windows environment.

NOTE: The Siebel Analytics Installation Wizard described in this topic runs under Windows systems only. The third-party Informatica installer also runs under Windows systems only. Administrators of UNIX-based systems must read the following paragraph.

Although Chapter 7, "Installing Siebel Analytics Software in the UNIX Environment" details instructions for running the installer software in the UNIX environment, administrators must use this chapter also, because UNIX systems must have some Windows-based components installed, such as the Server Administration Tool, Siebel Analytics Catalog Manager, and Data Warehouse Application Console (DAC) client.

Process of Installing the Siebel Analytics Platform Under Windows

This topic explains how to run the Wizard that installs the Siebel Analytics software.

NOTE: Before proceeding with this chapter, you must read Chapter 3, "Preparing Windows Environment for Installing Siebel Analytics," including the topic "Uninstalling or Upgrading Siebel Analytics (Windows)" on page 39.

The installation process consists of the following tasks:

- "Running the Siebel Analytics Installation Wizard (Windows)" on page 44
- "Initializing the Siebel Analytics Installation (Windows)" on page 48
- "Troubleshooting the Siebel Analytics Installation (Windows)" on page 49

Siebel Analytics Installation Wizard Options (Windows)

The Siebel Analytics installation wizard can be used to install more than one type of Siebel Analytics. Your choice of installation type depends on the number of components you are installing:

- The product license.

  See "Product Licensing Options for Siebel Analytics" on page 26.

- The complete Siebel Analytics suite, or only part of it.

  Table 10 on page 26 shows the Siebel Analytics components that are installed with each installation option. See also "Notes on Your Installer Choices" on page 28, which describes how the installer limits the options you may choose from.

Running the Siebel Analytics Installation Wizard (Windows)

This task is part of the "Process of Installing the Siebel Analytics Platform Under Windows."

The Siebel Analytics software uses a standard Windows installation program (setup.exe) for installation. In general, the process of installing the Siebel Analytics software in Windows consists of:

- Locating the installation software (on DVD 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.

When you are finished with the tasks described in this chapter, the components listed in Table 10 on page 26 are installed.

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, as shown in the following table of Siebel Analytics Installation wizard screens and prompts for Windows.

   To continue to the next screen, click Next. To return to a previous screen, click Back.

   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.

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

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. Click Next. For more information about application licensing, see "About Analytics Applications Licensing" on page 280.
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.

Screen	Your Action
Setup Type	The typical choices are:
	Complete Suite (all of the following) Siebel Analytics Server ■ Siebel Analytics Server ■ Siebel Analytics Server Administration Tool ■ Siebel Analytics Clustering Server ■ Siebel Analytics Scheduler Siebel Analytics Web Server ■ Siebel Analytics Web (including Corda PopChart) ■ Siebel Analytics Web Proxy ■ Siebel Analytics Catalog Manager Siebel Analytics Client Tools ■ Siebel Analytics Clients (nQcmd.exe and nqclient.exe) ■ Siebel Analytics ODBC Driver ■ Siebel Analytics Catalog Manager ■ Siebel Analytics Server Administration Tool Data Warehouse ■ Siebel Data Warehouse ■ Data Warehouse Application Console Custom (only for use by experienced Administrators) ■ Data Mining Engine for Real-Time Scoring **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.

Screen	Your Action
	NOTE: The setup type you choose affects the number and type of screens that subsequently appear. See "Notes on Your Installer Choices" on page 28. ■ For the purpose of this procedure, it is assumed that you have selected Complete Suite. However, for some types of installation, such as Data Mining Engine, you must select Custom and proceed from there. ■ If you are planning to install Siebel Analytics Web Server and Siebel Analytics Server on separate machines, follow the procedures shown in "Configuring Analytics on Separate Machines Under Windows" on page 69. In brief, during the installation, you do the following: ■ For the Web Server Machine While running Siebel Analytics installer, select the Siebel Analytics Web Server installation option. This installs the ODBC driver, ODBC Client, Answers, and Delivers files. ■ For the Siebel Analytics Server Machine While 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. Click Next.
Prerequisite Check	Select one or more database clients to be used to connect the Siebel Analytics Server to the relational database. The choices are: ■ Microsoft SQL Server ■ IBM DB2 Client ■ Oracle Client Click Next.

Screen	Your Action
Service Start Type	Choose whether these Siebel Analytics Services start automatically at machine startup time or need to be started manually: ■ Analytics Server (default is Automatic) ■ Analytics Scheduler (default is Manual) ■ Analytics Cluster (default is Manual) ■ Analytics Web (default is Automatic) Click Next.
Selection Error Message Language	The error messages from the Siebel Analytics Server are in one language only. Typically, these are relational server-side messages only. The Siebel Analytics Administrator can choose which language to display these messages in. The default is English. Click Next.
Cache Size	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.
Analytics Cluster Server Account Name	The Windows server account name that each of the servers should run under. This account name should be the same on all clustered servers. Accept the default (LocalSystem), or specify the account name (in the format domain\user) and the password. Click Next.
Scheduler Server Name	The default is the name of the machine on which Analytics Scheduler is being installed. If the Scheduler runs 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: ■ Application Console Server ■ Application Console Client ■ Application Console Client Utilities Click Next. **NOTE:** These components require 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 (preinstallation)	A list of all the features you have chosen, and the directory where they are to 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.

Screen	Your Action
Summary Information (postinstallation)	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 shuts down and restarts. ■ If you click No, you 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 Analytics Applications Licensing" on page 280.

3 Proceed to "Initializing the Siebel Analytics Installation (Windows)."

Initializing the Siebel Analytics Installation (Windows)

This task is part of the "Process of Installing the Siebel Analytics Platform Under Windows."

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.

After the computer has been restarted, proceed with the configuration of data components and (if you are licensed for Siebel CRM applications) the integration of Siebel Analytics with the operational applications. See "Postinstallation Check of Siebel Analytics Components (Windows)" on page 52.

Troubleshooting the Siebel Analytics Installation (Windows)

This topic is part of the "Process of Installing the Siebel Analytics Platform Under Windows," and details some common problems observed during installation. Possible solutions are suggested. To resolve the problem, look for it in the Symptom/Error Messages column in Table 15 on page 49.

Table 15. Common Installation Problems and Solutions for Windows Platforms

Symptom/Error Messages	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 Analytics Default Active Server Page" on page 57.
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.
ERROR: Couldn't Launch Server on Port #n	■ The TCP/IP settings are not correct on your computer. ■ The specified port is not available. ■ Image server may already be running.	■ Make sure that your TCP/IP settings are correct. ■ Pick another port number. ■ If you just upgraded the image server from a previous version on NT 4 or NT 2000 OS, and with the image server running as a service, reboot the server. ■ Check to see if image server is already started and running as a service on NT.
INVALID KEY: PopChart Image Server will shut down in three hours **NOTE:** This error message applies to Siebel Analytics version 7.5 only, not to versions 7.7 and higher.	The license key that you entered might not be the correct key, or you may not have entered a license key. **NOTE:** The location, structure, and content of the Corda image server directory have changed from Analytics versions prior to 7.7. The image server is now installed in the main installation directory. Also, the file key.txt is no longer required.	Make sure that correct license key is entered.

5 Configuring Siebel Analytics in the Windows Environment

After the Siebel Analytics Installation Wizard is finished, there may be a number of additional tasks you must complete in order to properly configure Siebel Analytics Server under Windows.

The number of postinstallation 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 fewer configuration tasks to perform than if you are installing a Siebel Analytics Industry Application with a Siebel Data Warehouse, with several localized languages.

The process of configuring the installed Siebel Analytics server components consists of the following subprocesses and tasks:

- "Postinstallation Check of Siebel Analytics Components (Windows)" on page 52
- "Process of Configuring Siebel Analytics Server Under Windows" on page 54
- "Process of Configuring Siebel Analytics Web (Windows)" on page 59
- "Process of Configuring Apache Tomcat Web Server (Windows)" on page 59
- "Configuring the ISAPI Plug-In for Siebel Analytics Web" on page 61
- "Process of Configuring Scheduler Server for Stand-Alone Analytics" on page 63
- "Process of Configuring Scheduler Server (All Deployments)" on page 66
- "Configuring Analytics on Separate Machines Under Windows" on page 69
- "Background Topics for Configuring Siebel Analytics Under Windows" on page 72

NOTE: Administering the Siebel Analytics server components involves using commands to stop and start servers, using scripts, running the Windows services, and similar tasks. These types of tasks are described in Chapter 9, "Administering Analytics Servers."

Postinstallation Check of Siebel Analytics Components (Windows)

After installing Siebel Analytics, but before configuring or administering the software components, you should perform various checks for file locations, permission settings, and so forth.

A postinstallation check involves the following tasks:

- "Checking Permissions Settings for Windows Installation Folders" on page 52
- "Checking the Analytics Installation Log Files (Windows)" on page 53

Checking Permissions Settings for Windows Installation Folders

Under Windows platforms, certain directories need to have the permission settings set in order for Siebel Analytics to function. Verify the settings shown in the following table and change them if required, using the following procedure.

Account	Setting
IIS domain user account that runs Siebel Analytics Web. This is generally the default user *IUSR_machinename*.	Read-only

To verify the Siebel Analytics Web permission settings

1. Access the Windows Properties dialog box from Windows Explorer.
2. Right-click the following directories:
   - Siebel Analytics installation directory
   - Siebel Analytics temporary data directory
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 the Analytics Installation Log Files (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 under 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.

Process of Configuring Siebel Analytics Server Under Windows

This process contains the following tasks:

- "Changing Database Connection Pool Settings" on page 54
- "Changing the Account Under Which a Windows Service Runs" on page 57
- "Changing the Analytics Default Active Server Page" on page 57
- "Configuring DB2 Connect for Siebel Analytics Server Queries" on page 58

CAUTION: Do not disable the RPC service. If you attempt to start Siebel Analytics Server on a machine where the RPC services or processes are not running, the application will not start and no log will be generated.

Changing Database Connection Pool Settings

This task is part of the "Process of Configuring Siebel Analytics Server Under Windows."

The SiebelAnalytics.rpd application repository contains multiple, preconfigured database connections. By default the database type is IBM DB2. When you start the Siebel Analytics Server, you receive linker errors in the NQServer.log, such as the following:

```
[54009] Unable to create connection pool Internal System Connection Pool in
repository Star.ld.so.1: /t3fs4/AN1393/SiebelAnalytics/Bin/nqsserver.exe: fatal:
libdb2.so.1: open failed: No such file or directory

[nQSError: 46029] Failed to load the DLL /t3fs4/AN1393/SiebelAnalytics/Bin/
libnqsdbgatewaydb2cli35.so. Check if 'DB2 CLI' database client is installed.
```

This behavior is expected.

You must reconfigure all the database connections appropriate to your environments. This includes changing the database types and updating the user names and passwords. (In addition, while testing the Siebel Analytics Server installation, 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 versions of Siebel Analytics.)

The default settings use the following patterns:

- Password for all the database connections is *db2*. Update the passwords for your particular database connections.
- Data Source Name (DSN) for transactional databases is *VALUEOF(OLTP_DSN)*.
- User for transactional databases is *VALUEOF(OLTP_USER)*.
- Data Source Name (DSN) for data warehouses is *VALUEOF(OLAP_DSN)*.
- User for data warehouses is *VALUEOF(OLAP_USER)*.

The connection pools are described briefly in Table 16 on page 55.

Table 16. Connection Pools

Connection Name	Description
BBB Data Warehouse	Enterprise visibility Siebel Data Warehouse. Siebel operational applications Analytics customers only.
BBB OLTP	Enterprise visibility Siebel transactional database. Siebel operational applications Analytics customers only.
BBB XLS Data	DSN is the same as the connection pool name. Data is stored in C:\Data\Applications\BBB\BBB. Siebel operational applications Analytics customers only.
DataMining Demo	Data Warehouse visibility. Siebel Data Mining customers only.
ERM Siebel OLTP	Workforce Analytics connection to Siebel transactional database. Workforce Analytics customers only.
Externalized Metadata Strings	Connection to the Siebel operational application database to load the translations of Metadata Strings. Financial Services customers and all customers deploying Analytics in a language other than English. **NOTE:** This connection pool is configured to be the same as the Siebel transactional database.
Forecasting Siebel Data Warehouse	Connection to the Siebel Data Warehouse. Forecasting Analytics customers only.
Forecasting Siebel OLTP	Connection to the Siebel transactional database. Real-time Forecasting Analytics customers only.
Incentive Compensation Siebel OLTP	Database connection to the Siebel transactional database. Incentive Compensation Analytics customers only.
Pharma Data Warehouse	Connection to the Pharmaceutical data warehouse. Pharmaceutical industry-specific customers only.
Real-time OLTP	Connection to the Siebel transactional database. Real-time Analytics (all customers).
SIA Data Warehouse	Connection for Siebel Industry Applications data warehouse. For Siebel Industry Applications customers only.

Table 16. Connection Pools

Connection Name	Description
Siebel Analytics Usage	Usage Tracking Writer Connection Pool connects to the database where you store the usage statistics of the Siebel Analytics Server. Optional for all customers. **NOTE:** Using this feature requires that Siebel Analytics Scheduler be set up to load the usage statistics into the database.
Siebel Data Warehouse	Database connection to the Siebel Data Warehouse. Analytics applications customers only.
Siebel OLTP	**NOTE:** There are two connection pools to the Siebel transactional database. Both should be configured properly. OLTP DbAuth connects to the Siebel transactional database for Authentication and Authorization. The user name and password is preconfigured to USER and PASSWORD and should be left as such if you want to use database logons to authenticate users. All customers.
UQ Siebel OLTP	Connection to the Siebel transactional database. Universal Queuing customers only.
Usage Accelerator Datawarehouse	Database connection to the Siebel Data Warehouse. Analytics applications customers only.

Changing the Account Under Which a Windows Service Runs

This task is part of the "Process of Configuring Siebel Analytics Server Under Windows."

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, open the Services list.
2. Select the Siebel Analytics service and click Startup. The Service dialog opens.
3. In the Log On As portion of the Services dialog, select the option This Account and then click the button to the right of the text box. The Add User dialog opens.
4. Select the user account in which you want the service to run, click Add, and then click OK.
5. Enter the password for the user in the Services dialog, 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 attempts to use the new account to start up the service.

Changing the Analytics Default Active Server Page

This task is part of the "Process of Configuring Siebel Analytics Server Under Windows."

After you have installed Siebel Analytics, the browser may not load the default Active Server Page (ASP). 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

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 DB2 Connect for Siebel Analytics Server Queries

This task is part of the "Process of Configuring Siebel Analytics Server Under Windows."

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.

NOTE: Be sure to use backslashes to pass the quote marks as part of the string.

The following example uses an 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
```

Process of Configuring Siebel Analytics Web (Windows)

This process describes the installation of the components required to run Siebel Analytics Web under Windows. After Siebel Analytics Web is installed and configured, you must configure a Web server, and then create a link to it from one of the third-party Web servers.

Configuring Siebel Analytics Web under Windows is a three-part process:

1. "Installing a Web Server for Siebel Analytics Web (Windows)" on page 36
2. Configuring a Web Server

   If you are planning to use Apache Tomcat as a Web server, see "Process of Configuring Apache Tomcat Web Server (Windows)" on page 59.
3. Creating a Link Between Analytics Web and HTTP Web Servers

   If you are planning to use Microsoft ISAPI plug-in, see "Configuring the ISAPI Plug-In for Siebel Analytics Web" on page 61.

NOTE: The credentials for the Analytics Web user should be identical to the permissions for the user running all Siebel Analytics processes.

Process of Configuring Apache Tomcat Web Server (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 tasks:

1. Install the required software.

   See "Installation Sequence for Apache Tomcat (Windows)" on page 73. 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* on Siebel SupportWeb for necessary versions of the software.
2. Install and configure Siebel Analytics on the Tomcat Web server.
3. Test the Tomcat Web server installation.

   The following topics describe the configuration of the Apache Tomcat Web server:

   - "Configuring the Apache Tomcat Web Server for Siebel Analytics Web (Windows)" on page 60
   - "Testing the Tomcat Web Server Installation Under Windows" on page 60

Configuring the Apache Tomcat Web Server for Siebel Analytics Web (Windows)

This task is part of the "Process of Configuring Apache Tomcat Web Server (Windows)."

To configure Apache Tomcat Web server (stand-alone under 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 Under Windows

This task is part of the "Process of Configuring Apache Tomcat Web Server (Windows)."

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.

Configuring the ISAPI Plug-In for Siebel Analytics Web

The ability to separate the Analytics Web ISAPI plug-in and the Analytics Web service onto different machines provides control over network and resource allocation and partitioning when firewalls are used.

All of the settings can be configured through the Windows registry and instanceconfig.xml files. The J2EE Container plug-in ties the supported Web server on UNIX to Siebel Analytics Web.

To configure an ISAPI plug-in for Siebel Analytics Web

1 In the registry located on the Web server, add the following entry:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Siebel Systems, Inc.\Siebel Analytics\
Web\7.7\ISAPI\ServerConnectString
```

Create the following value:

sawtcp://*<fully-qualified domain name of web server>*:9710

For example, sawtcp://sastest:9710

Port 9710 is the default port on which the Analytics Web Service listens to remote procedure calls from one or more plug-ins.

NOTE: Make sure that the fully-qualified domain name of the Web server is set up as a host with its own IP address.

2 Make sure the ports are open, with the hosts shown in the following table:

Source Port	Destination Port	Setting
All	80	allow
0-65535	2320	allow
0-65535	48000-48004	allow
1024-65535	9703	allow
1024-65535	9710	allow
89	89	allow

3 Adjust the host administration.

- Navigate to Site Map > Integration Administration > Host Administration.
- Set the NQHOST.
- Enter the IP address of the Web server in the Name field.
- Delete the entry SEGMENTSERVER.

4 Adjust the Symbolic URLs.

- Navigate to Site Map > Integration Administration > Symbolic URL Administration.
- Change all URLs with the value SEGMENTSERVER to NQHOST.
- Make sure the Host Name points to the IP address of the Web server.

5 Navigate to List of Value Administration and search for the following value:

Type: SEG_BRIDGE_PREF

LIC: ANALYTICS_HOST_NAME

The Display Value must be <*destination Web Server*>/Analytics.

For example, SASTEST/Analytics.

6 On the Web server, disable the Siebel Analytics Web service.

7 Adjust the security settings of the client Internet Explorer.

Go to Internet Explorer menu > Tools > Internet Options > Privacy and set the level to Low.

Process of Configuring Scheduler Server for Stand-Alone Analytics

The process described in this section is only for sites that are running Stand-Alone Siebel Analytics and using Siebel Analytics Scheduler.

NOTE: If you are not using Scheduler, you do not need the information in this topic.

- If you are using Scheduler, read this topic and also see *Siebel Analytics Scheduler Guide*.

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

The process of creating and configuring Scheduler tables consists of the following tasks:

- "Creating Analytics Scheduler Databases and Tables for the Scheduler" on page 64
- "Creating Analytics Scheduler Databases and Tables for a Relational Database" on page 65

TIP: If you are upgrading from any version of Siebel Analytics prior to version 7.5, contact Siebel Technical Support for assistance. For versions 7.7 and later, the Analytics Scheduler tables are included in the Siebel operational applications transactional database.

What the Scheduler Server Does

Scheduler uses a single commercial back-end database to store pertinent information about a job, its instances, and its parameters. 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*.

The Scheduler service starts only if the back-end database satisfies the following conditions:

Database Must Be...	Notes
Configured	There is a one-to-one relationship between the back-end database and Siebel Analytics Scheduler. Do not configure multiple Siebel Analytics Scheduler applications to use a single back-end database.
Operational	For information about the specific back-end databases supported by Siebel Analytics Scheduler, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.
Mixed Authentication Mode	For example, if the database is SQL Server, then the security mode should be set to allow both SQL Server and Windows Authentication for logon. Do not use operating system authentication for the back-end database login. If you do, the Scheduler service may not start in some cases.

Creating Analytics Scheduler Databases and Tables for the Scheduler

This task is part of the "Process of Configuring Scheduler Server for Stand-Alone Analytics."

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

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

To create a database and tables for use by Analytics 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).

   Use the appropriate procedure for your back-end database, as shown in "Creating Analytics Scheduler Databases and Tables for a Relational Database" on page 65.

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

Table 17 gives brief descriptions of the database tables used by Siebel Analytics Scheduler.

Table 17. Analytics Scheduler Table Names and Descriptions

Table Name	Table Description
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. For information about usage tracking, see *Siebel Analytics Server Administration Guide*.
S_NQ_JOB	This table is used by Scheduler to store information about scheduled jobs.
S_NQ_INSTANCE	The S_NQ_INSTANCE table stores information about scheduled job instances.
S_NQ_ERR_MSG	This table stores error messages for Scheduler job instances that do not complete successfully.
S_NQ_JOB_PARAM	This table holds information about Scheduler job parameters for scheduled jobs.

Creating Analytics Scheduler Databases and Tables for a Relational Database

This task is part of the "Process of Configuring Scheduler Server for Stand-Alone Analytics."

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

- Microsoft SQL Server
- Oracle
- IBM DB2

Creating a Scheduler Database and Tables on SQL Server

Use the following procedure to create a Scheduler database and tables for Microsoft SQL Server.

NOTE: For usage statistics, create the table in SAACCT.xxx.sql.

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.

Creating a Scheduler Database and Tables on Oracle

Use the following procedure to create a Scheduler database and tables for Oracle.

NOTE: For usage statistics, create the table in SAACCT.xxx.sql.

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.

Creating a Scheduler Database and Tables on IBM DB2

Use the following procedure to create a Scheduler database and tables for IBM DB2.

NOTE: For usage statistics, create the table in SAACCT.xxx.sql.

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.

Process of Configuring Scheduler Server (All Deployments)

The following tasks are for all deployments of Siebel Analytics Scheduler:

- "Configuring Scheduler and Analytics Web Servers Installed on Separate Machines" on page 66
- "Changing Scheduler Table Names (Windows)" on page 67
- "Updating the Scheduler Configuration (UNIX)" on page 68
- "Siebel Analytics Scheduler as a Background Process (UNIX Only)" on page 68

For all other Scheduler Server configuration tasks, see the *Siebel Analytics Scheduler Guide*, located under the Windows directory `$INSTALLDIR\SiebelAnalytics\Document`.

Configuring Scheduler and Analytics Web Servers Installed on Separate Machines

The registry setting must be specified when the Scheduler and the Analytics Web Server are not installed on the same machine. This registry setting is specified on the Analytics Web Server machine and points to the Scheduler machine address.

Changing the ScheduleServer Registry Setting (Windows)

To change the ScheduleServer registry setting under Windows

1. Run regedit.
2. Navigate to `HKEY_LOCAL_MACHINE\SOFTWARE\Siebel Systems, Inc.\Siebel Analytics\Web\<n.n>\Alerts`, where *<n.n>* is the version number of Siebel Analytics.
3. For the subkey ScheduleServer, change the value in the Data column to the Scheduler machine name.

Changing the ScheduleServer Registry Setting (UNIX)

To change the ScheduleServer registry setting under UNIX

1. Open the `Analytics/setup/sa.reg` file.
2. Edit the ScheduleServer entry.

At the following lines:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Siebel Systems, Inc.\Siebel Analytics\
Web\7.7\Alerts]

"ScheduleServer"="HOSTNAME"

"Enabled"="Y"
```

Using the machine IP address, substitute the machine on which the Scheduler process runs as the ScheduleServer parameter for HOSTNAME.

3. Save and close the file.
4. From the `Analytics/setup` directory, run the following commands to import the modified sa.reg file:

```
$ sa-cli.sh
$ ./regedit -c sa.reg
```

You can verify the registration by running regedit from the command line again and seeing the registry entries.

Changing Scheduler Table Names (Windows)

You can change the names of the tables that Scheduler uses by adding settings to the Windows registry, as shown in the following example.

NOTE: The same method of changing the registry is used under both Windows and UNIX platforms. However, before beginning step 1 of the following procedure, follow the steps in "Changing Scheduler Table Names (UNIX)" on page 67.

Changing Scheduler Table Names (UNIX)

Before modifying the registry, set up the UNIX environment with the command scripts sa.sh or sa.csh, as described in "UNIX Scripts for Basic Siebel Analytics Server Settings" on page 104.

After the UNIX display is set, continue with the following procedure.

NOTE: For this example, a new key named DB Column Names has been created.

To change table names for Analytics Scheduler

1. In regedit, navigate to [HKEY_LOCAL_MACHINE\SOFTWARE\Siebel Systems, Inc.\Siebel Analytics\Scheduler\7.7\DB Column Names].
2. For each of the entries under the DB Column Names key, add the subkey and string values shown in the following table.

Name	Type	Data
TABLE_JOBS	REG_SA	S_NQ_JOB
TABLE_INSTANCES	REG_SA	S_NQ_INSTANCE
TABLE_PARAMS	REG_SA	S_NQ_JOB_PARAM
TABLE_ERRMSGS	REG_SA	S_NQ_ERR_MSG

   The values created in the data string become the values used for Scheduler table names.

NOTE: Changing the table names requires a restart of Scheduler.

Siebel Analytics Scheduler as a Background Process (UNIX Only)

Under UNIX systems, starting Siebel Analytics Scheduler as a background process requires that you perform the following procedure.

To start Scheduler as a background process under UNIX

1. Export the display to an X Window server that is always running.
2. Run the initialization script.
3. Run the Siebel Analytics Scheduler executable.

The following example is for the bash shell:

```
export DISPLAY="myaccount:0.0"

sa.sh

nqscheduler.exe &
```

You may need to modify this example for other shells or to use DISPLAY options.

Updating the Scheduler Configuration (UNIX)

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

```
schconfig.exe
```

Configuring Analytics on Separate Machines Under Windows

The Analytics Web, Analytics Client, and Analytics Server components can be installed to run on separate machines. Use the following procedures to configure Siebel Analytics Web server and Siebel Analytics Server to run on separate machines:

- "Configuring Analytics on a Web Server Machine (Windows)" on page 69
- "Configuring Analytics on a Siebel Analytics Server Machine (Windows)" on page 70
- "Configuring Oracle Databases for the Siebel Analytics Server Machine" on page 71

NOTE: Some steps that are done automatically when installing on a single machine, such as creating a DSN, must be done manually here.

Configuring Analytics on a Web Server Machine (Windows)

This task is part of the "Configuring Analytics on Separate Machines Under Windows."

NOTE: When you ran Siebel Analytics installer, you must have selected the Siebel Analytics Web Server installation option. This installed the ODBC driver, ODBC Client, Answers, and Delivers files.

To configure Siebel Analytics on a Web server machine Under Windows

1. Create a system DSN called Analytics Web.

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

2. Configure the Analytics Web DSN to point to the second machine where the Siebel Analytics Server is installed.
3. Make sure that the current Web Catalog file and any custom XML files are in the Catalog directory on the Web machine.
4. Install the chart image server on the Web machine.

   NOTE: This note applies if you are upgrading from Siebel Analytics 7.5 versions.
   The location, structure, and content of the image server directory have changed from Siebel Analytics version 7.5. The image server is now installed in the main installation directory. Also, the file key.txt is no longer required.

5. Make sure that the Siebel Analytics Web service is running.
6. Proceed to "Configuring Analytics on a Siebel Analytics Server Machine (Windows)" on page 70.

Configuring Analytics on a Siebel Analytics Server Machine (Windows)

This task is part of the "Configuring Analytics on Separate Machines Under Windows," and continues the process of installing the Siebel Analytics Web server and Siebel Analytics Server on separate machines, begun in "Configuring Analytics on a Web Server Machine (Windows)."

NOTE: When you ran Siebel Analytics installer, you must have selected the Siebel Analytics Server installation option.
It is also possible to choose the Complete installation and not make use of the Web components on this machine.

To configure Siebel Analytics on a Siebel Analytics Server machine under Windows

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

Configuring Oracle Databases for the Siebel Analytics Server Machine

This task is part of the "Configuring Analytics on Separate Machines Under Windows."

If your native database is Oracle, the machine running Siebel Analytics Server must have the Siebel Analytics-supported Oracle Client installed. In the tnsnames.ora file, the defined entry name must match the Data Source Name used in the connection pools used in all Siebel Analytics repository physical Oracle databases.

For example, in the following example of a tnsnames.ora entry, the corresponding Siebel Analytics repository connection pool Data Source Name is ITQA2.

```
ITQA2 =
  (DESCRIPTION =
   (ADDRESS_LIST =
    (ADDRESS = (PROTOCOL = TCP)(HOST = ITQALAB2)(PORT = 1521))
   )
  (CONNECT_DATA =
   (SERVICE_NAME = ITQALAB2.corp)
   )
  )
```

The following procedure shows how to check your repository connection pool settings against the Oracle tnsnames.ora settings.

To check that an Oracle database refers to the Siebel Analytics Server machine

1. Log on to Server Administration Tool.
2. In the physical layer, double-click on the appropriate OLTP cylinder icon. Expand it.
3. Double-click the appropriate OLTP Connection Pool to open the Connection pool window.
4. In the Connection Pool window, check that the following is true:
   - The Call Interface field displays the appropriate value for the release of Oracle being used.
   - The Data Source Name displays the Oracle alias that you have defined in the tnsnames.ora setting.

   NOTE: This Data Source Name is *not* the DSN name defined in Settings > Control Panel > Data Sources (ODBC).
5. In the Oracle folder, open the tnsnames.ora file.
6. Check that a valid entry name exists:
   - Matching the Siebel Analytics repository's connection pool settings for the Data Source Name
   - Specifying the targeted Oracle physical database

Background Topics for Configuring Siebel Analytics Under Windows

The following topics give more information on the procedures in this chapter:

- "Configuring the Siebel Data Warehouse and the Data Warehouse Application Console" on page 72
- "The Siebel Analytics Repository" on page 72
- "Configuring the Analytics Web Server and HTTP Server (Windows)" on page 73
- "Installation Sequence for Apache Tomcat (Windows)" on page 73
- "Accessing Siebel Analytics Applications Dashboards" on page 74

Configuring the Siebel Data Warehouse and the Data Warehouse Application Console

You use the Data Warehouse Application Console (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, you must configure it. See the information on configuring the Siebel Data Warehouse in *Siebel Data Warehouse Installation and Administration Guide*.
  - For installations under UNIX, copy the license.key file to the directory $INSTALLDIR/DAC/license.
- 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*.

The Siebel Analytics Repository

Depending on your product licensing, you may have a full Siebel Analytics repository or a sample.

- The default Siebel Analytics applications repository is SiebelAnalytics.rpd.

  You generate this repository using the 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.

While testing the Siebel Analytics Server installation, 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 versions of Siebel Analytics. For details of configuring and administering the repository file, see *Siebel Analytics Server Administration Guide*.

Configuring the Analytics Web Server and HTTP Server (Windows)

Siebel Analytics Web Server and the Web (or HTTP) server run as separate processes.

- Siebel Analytics Web server executable performs the functions.

  The Analytics Web Server process hosts most of the business logic of Siebel Analytics Web.

- The Web server process is a third-party application, such as Apache Tomcat or other application.

  The Web (HTTP) server hosts a lightweight plug-in that acts as a proxy for requests to Siebel Analytics Web. A Java servlet 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.

Installation Sequence for Apache Tomcat (Windows)

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

1. Java 2 Software Development Kit (SDK).

   Include the Java executable in the system PATH variable.

2. 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 the World Wide Web Publishing Service is running.

     If it is, stop it and set the startup type to Manual.
   - Install the Apache Web server using a path with short directory names and no spaces.

     For example:

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

     This makes the MS-DOS path name equivalent to the Windows file name.

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

     For example: `D:\apache\tomcat`
   - Make sure the Apache Tomcat service is running.

Accessing Siebel Analytics Applications Dashboards

If you installed a Siebel Analytics application, the Siebel Analytics dashboards are accessible only through the Siebel operational application interface. Chapter 16, "Configuring Metadata for Analytics Applications," describes the configuration necessary for the Siebel Analytics dashboards to be accessible from views in the Siebel operational application. See also the Caution statement under "Process of Configuring Siebel Analytics with Siebel Web Extension (SWE)" on page 208.

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

6 Preparing UNIX Environment for Installing Siebel Analytics

This chapter describes the steps to prepare a UNIX environment for installing Siebel Analytics components.

NOTE: Because the Siebel Analytics Installation Wizard and the third-party Informatica installer run under Windows systems only, Administrators running UNIX systems must also read and follow Chapter 3, "Preparing Windows Environment for Installing Siebel Analytics." The topic "Windows Requirements for UNIX Platforms" on page 75 specifies the chapters relevant to Windows platform components.

The following topics describe the tasks involved in setting up a UNIX environment to install Siebel Analytics:

- "Windows Requirements for UNIX Platforms" on page 75
- "Siebel Analytics Components Supported Under UNIX" on page 76
- "Installation Requirements for All UNIX Platforms" on page 77
- "Installation Requirements for HP-UX" on page 77
- "Uninstalling or Upgrading Siebel Analytics (UNIX)" on page 78

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

Windows Requirements for UNIX Platforms

UNIX administrators need to install some Siebel Analytics components under Windows systems. For example, the Siebel Analytics Installation Wizard runs only under Windows systems, and the third-party Informatica installer is available for Windows only. Also, UNIX systems must have some Windows-based components installed. See the following chapters:

- Chapter 3, "Preparing Windows Environment for Installing Siebel Analytics"
- Chapter 4, "Installing Siebel Analytics Under Windows"
- Chapter 5, "Configuring Siebel Analytics in the Windows Environment"

Siebel Analytics Components Supported Under UNIX

The following Siebel Analytics components are supported under UNIX platforms:

- Siebel Analytics Server
- Siebel Analytics Server Clustering
- Siebel Analytics Web:
  - Siebel Intelligence Dashboard
  - Siebel Answers
  - Siebel Delivers
  - SAW Plug-in [Cayman and beyond]
- Siebel Analytics Scheduler

  NOTE: Analytics Scheduler scripts (custom Jscript and VBScript scripts) are supported only under Windows platforms. Only iBots are supported under UNIX.
- 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.
- Data Warehouse Administration Console (DAC)

See also "Siebel Analytics Installation and Licensing Options" on page 25 for related information about supported components.

About Installing and Configuring the Analytics Repository

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

Installation Requirements for All UNIX Platforms

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

NOTE: The installation script creates the essential environment settings.

- Choose a user ID that can run all Siebel Analytics processes.

  You may need to create the user ID first. (This is a task for a UNIX Administrator.)

- You must have the third-party software for Java and Xvfb installed.

  See *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb for the correct versions to use with this version of Siebel Analytics.

- If you are reinstalling or installing a new version of Siebel Analytics, you must first uninstall the software. See "Uninstalling or Upgrading Siebel Analytics (UNIX)" on page 78.

Installation Requirements for HP-UX

For successful Siebel Analytics Server operations on HP-UX operating systems, check the following factors.

- Some kernel parameters, such as those listed in the following table, may need to be adjusted.

Kernel Parameter Name	Value
max_thread_proc	1024
maxdsiz	0x90000000
maxssiz	16777216
maxtsiz	0x40000000
shmseg	120
swapmem_on	1
maxfiles	2048
maxfiles_lim	2048
dbc_max_pct	50

  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.

- 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* on Siebel SupportWeb.

Uninstalling or Upgrading Siebel Analytics (UNIX)

You may be required to reinstall Siebel Analytics, or to install or upgrade to a newer version of Siebel Analytics software. Before you install or upgrade, however, you must first uninstall your currently-installed version before proceeding with the installation or upgrade.

Under UNIX platforms, there is no Siebel Analytics uninstall script. If you wish to uninstall the software, follow the procedure in this topic.

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

- Make backups of the Web Catalog, repository (.rpd), instanceconfig.xml, DBFeatures.INI, NQSConfig.INI, and NQClusterConfig.INI files, and move them to a temporary location.

  NOTE: The DBFeatures.INI, NQSConfig.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.

- If you are upgrading the software, the newer version does 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.
- The Siebel Analytics Web Catalog stores the application dashboards and report definitions and contains information regarding permissions and accessibility of the dashboards by groups. If you are upgrading a Siebel Analytics Web Catalog from an earlier version, see *Siebel Analytics Web Administration Guide* before installing Siebel Analytics.
- If you are upgrading the software, the newer version has different style sheets (.css files) from earlier versions of Siebel Analytics. It is recommended that you follow the procedure in "Reapplying Customized Style Sheets" on page 207.

To uninstall Siebel Analytics under UNIX

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

7 Installing Siebel Analytics Software in the UNIX Environment

This chapter provides information about installing Siebel Analytics components in the UNIX environment. It is necessary to install some components on Windows platforms, therefore UNIX administrators must read parts of the Windows chapters as well. See "Installing Siebel Analytics Components (UNIX)" on page 79.

NOTE: Before proceeding with this chapter, you must read Chapter 6, "Preparing UNIX Environment for Installing Siebel Analytics," including the topic "Uninstalling or Upgrading Siebel Analytics (UNIX)" on page 78.

The following topics describe the tasks for installing Siebel Analytics under a UNIX environment:

- "Windows Requirements for UNIX Platforms" on page 75
- "Installing Siebel Analytics Components (UNIX)" on page 79
- "Inserting Your Siebel Analytics Web License Keys (UNIX)" on page 101

Installing Siebel Analytics Components (UNIX)

This process describes how to install only the Siebel Analytics Server software under UNIX. For instructions to install other Siebel Analytics components under Windows, see Chapter 4, "Installing Siebel Analytics Under Windows."

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 process contains the following tasks:

- "Downloading Siebel Analytics Installation Files" on page 80
- "Using the Correct Analytics Installation Type" on page 81
- "Running the Analytics Installer Script" on page 82
- "UNIX Installation Script Prompts" on page 83

NOTE: You can delete the installation directory after saving any repositories and configuration files. A remove utility is not provided for UNIX. See "Uninstalling or Upgrading Siebel Analytics (UNIX)" on page 78.

Downloading Siebel Analytics Installation Files

This task is part of the process "Installing Siebel Analytics Components (UNIX)."

The following procedure must be done by a UNIX administrator or by a Siebel Administrator with sufficient privileges.

To download Siebel Analytics installation files under UNIX

1. Log in as the user who is to run the Analytics processes.
2. Insert the Siebel Analytics Server installation DVD.
3. Change to the directory where the installation DVD is mounted (or change directory to the downloaded software).
4. Download the Analytics files by using FTP to copy them to the desired server and directory.

   NOTE: Make sure you FTP them in binary mode.
5. After the files are downloaded, set the read/write/execute permissions for all users on the files.

   CAUTION: Do not unzip the installation files having a .gz extension. The installation script (sainstall or sainstall-apps) itself unzips these files.

   a. Run the command `chmod 777 *`.

   b. Run the command `ls -la`.

      Confirm that all the files have permissions resembling the following entry:

      ```
      -rwxrwxrwx   1   an7715    other     74553  Jan 10 11:02  sainstall-apps
      ```
6. Run the installer. See "Using the Correct Analytics Installation Type" on page 81.

Using the Correct Analytics Installation Type

This task is part of the process "Installing Siebel Analytics Components (UNIX)."

Your licensing is either Siebel Analytics Stand-Alone or Siebel Analytics Applications. The license type affects the choices among installation types for each license is shown in Table 18 on page 81.

Table 18. Siebel Analytics Installation Options By License

License	Option	See the Topic...
Siebel Analytics Stand-Alone	All components	See "Installing Complete Stand-Alone Analytics (UNIX)" on page 83.
	Siebel Analytics Server (including Siebel Analytics Client)	**NOTE:** You must respond to a different set of prompts for each setup option type you choose. See "Installing Parts of Analytics Stand-Alone (UNIX)" on page 85.
	Siebel Analytics Client only	
	Siebel Analytics Web (including Siebel Analytics Client) only	
	Siebel Analytics Scheduler only	
	Siebel Analytics Cluster Controller only	
Siebel Analytics Applications	All components	See "Installing Complete Analytics Applications (UNIX)" on page 92.
	Siebel Analytics Server (including Siebel Analytics Client)	**NOTE:** You must respond to a different set of prompts for each setup option type you choose. See "Installing Partial Analytics Applications (UNIX)" on page 93. Although the Siebel Analytics repository and Web catalog are transferable to UNIX platforms, the Server Administration Tool is currently supported only on the Windows platform. You must first install and configure the repository file (.rpd file) on a Windows platform using the Server Administration Tool, then transfer the repository file to the UNIX platform using FTP.
	Siebel Analytics Client	
	Siebel Analytics Scheduler only	
	Siebel Analytics Cluster Controller only	
	Siebel Analytics Web (including Siebel Analytics Client) only	
	Siebel Data Warehouse Administration Console Server	

Running the Analytics Installer Script

This task is part of the process "Installing Siebel Analytics Components (UNIX)."

Run the installer script for the Siebel Analytics installation option you have purchased, as shown in Table 19 on page 82.

NOTE: Default ports are used for installation. If you want to modify the port numbers, see Appendix A, "NQSConfig.INI File Reference."

Table 19. Siebel Analytics Installation Scripts

UNIX Shell	Installer Script for Stand-Alone Analytics	Installer Script for Analytics Applications
Korn	./sainstall	./sainstall-apps
C	sainstall	sainstall-apps

To install the Siebel Analytics software under UNIX

1 In the installation directory, use the command:

```
run [installer script]
```

where [installer script] is the name of the script that you have identified in Table 19 on page 82.

TIP: 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 "UNIX Installation Script Prompts" on page 83.

2 Proceed to "Testing the Siebel Analytics Server Installation (UNIX)" on page 123.

UNIX Installation Script Prompts

This section is part of the process "Installing Siebel Analytics Components (UNIX)."

The prompts for all the types of Siebel Analytics installation options are shown in the following topics:

- "Installing Complete Stand-Alone Analytics (UNIX)" on page 83
- "Installing Parts of Analytics Stand-Alone (UNIX)" on page 85

  NOTE: Incremental installation of Siebel Analytics components is not supported under UNIX. Use the following sections only if you want to install one component. If you decide later to add additional components, you will need to uninstall Siebel Analytics first.

- "Installing Complete Analytics Applications (UNIX)" on page 92
- "Installing Partial Analytics Applications (UNIX)" on page 93

  NOTE: Incremental installation of Siebel Analytics components is not supported under UNIX. Use the following sections only if you want to install one component. If you decide later to add additional components, you will need to uninstall Siebel Analytics first.

Installing Complete Stand-Alone Analytics (UNIX)

This section is part of the process "Installing Siebel Analytics Components (UNIX)."

The prompts for the complete Stand-Alone Siebel Analytics installation under UNIX platforms are listed in table Table 20 on page 83.

Table 20. Prompts for Complete Stand-Alone Siebel Analytics Installation Under UNIX

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 $INSTALLDIR.
Is $INSTALLDIR correct?	y/n/q	
Cache Location	$INSTALLDIR/Data/Cache	500 MB free space required

Table 20. Prompts for Complete Stand-Alone Siebel Analytics Installation Under UNIX

Prompt	Default	Notes
Is $INSTALLDIR/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		
Launching installer		
Installing Siebel Analytics components.		
Installation done!		
The Install Log is located at $INSTALLDIR/Install.log		

Installing Parts of Analytics Stand-Alone (UNIX)

This section lists the prompts for the types of partial Siebel Analytics Stand-Alone installations under UNIX platforms.

NOTE: Incremental installation of Siebel Analytics components is not supported under UNIX. Use the following sections only if you want to install one component. If you decide later to add additional components, you will need to uninstall Siebel Analytics first.

The partial installations are detailed in the following sections:

- "Installing Stand-Alone Siebel Analytics Server Only (UNIX)" on page 86
- "Installing Stand-Alone Analytics Client Only (UNIX)" on page 87
- "Installing Stand-Alone Siebel Analytics Web Only (UNIX)" on page 88
- "Installing Stand-Alone Analytics Scheduler Only (UNIX)" on page 90
- "Installing Stand-Alone Cluster Controller Only (UNIX)" on page 91

Installing Stand-Alone Siebel Analytics Server Only (UNIX)

The prompts for the Stand-Alone installation of Siebel Analytics Server only under UNIX are listed in Table 21 on page 86.

Table 21. Prompts for Stand-Alone Installation of Siebel Analytics Server Only Under UNIX

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 $INSTALLDIR.
Is $INSTALLDIR correct?	y/n/q	
Cache Location	$INSTALLDIR/Data/Cache	500 MB free space required
Is $INSTALLDIR/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 $INSTALLDIR/Install.log		

Installing Stand-Alone Analytics Client Only (UNIX)

The prompts for the Stand-Alone installation of Siebel Analytics Client only under UNIX are listed in Table 22 on page 87.

Table 22. Prompts for Stand-Alone Installation of Siebel Analytics Client Only Under UNIX

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	
Siebel Analytics Server 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 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	
Installing Siebel Analytics components.		
Installation done!		
The Install Log is located at $INSTALLDIR/Install.log		

Installing Stand-Alone Siebel Analytics Web Only (UNIX)

The prompts for the Stand-Alone installation of Siebel Analytics Web and Siebel Analytics Client only under UNIX are listed in Table 23 on page 88.

Table 23. Prompts for Stand-Alone Installation of Siebel Analytics Web and Siebel Analytics Client Only Under UNIX

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	
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 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		

Table 23. Prompts for Stand-Alone Installation of Siebel Analytics Web and Siebel Analytics Client Only Under UNIX

Prompt	Default	Notes
Launching installer		
Installing PopChart		
Preparing SILENT Mode Installation		
PopChart Installation has been completed.		
Installing Siebel Analytics components.		
Installation done!		
The Install Log is located at $INSTALLDIR/Install.log		

Installing Stand-Alone Analytics Scheduler Only (UNIX)

The prompts for the Stand-Alone installation of a Stand-Alone Siebel Analytics Scheduler only under UNIX are listed in Table 24 on page 90.

Table 24. Prompts for Stand-Alone Installation of a Stand-Alone Siebel Analytics Scheduler Only Under UNIX

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 $INSTALLDIR.
Is $INSTALLDIR correct?	y/n/q	
Cache Location	$INSTALLDIR/Data/Cache	500 MB free space required
Is $INSTALLDIR/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	
Installing Siebel Analytics components.		
Installation done!		
The Install Log is located at $INSTALLDIR/Install.log		

Installing Stand-Alone Cluster Controller Only (UNIX)

The prompts for the Stand-Alone installation of Siebel Analytics Cluster Controller only under UNIX are listed in Table 25 on page 91.

Table 25. Prompts for Stand-Alone Installation of Siebel Analytics Cluster Controller Only Under UNIX

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	
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 Complete Analytics Applications (UNIX)

This section is part of the process "Installing Siebel Analytics Components (UNIX)."

The prompts for the complete Siebel Analytics Applications installation under UNIX platforms are listed in Table 26 on page 92.

NOTE: If you have purchased a Siebel Analytics application, the Siebel Analytics repository (.rpd) file is generated based on the license keys for that application. See "How Analytics Applications Licensing Affects Repository Size" on page 29 for more information about application licensing.

Table 26. Prompts for Complete Siebel Analytics Applications Installation Under UNIX

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	8. (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 $INSTALLDIR.
Is $INSTALLDIR correct?	y/n/q	
Cache Location	$INSTALLDIR/Data/Cache	500 MB free space required
Is $INSTALLDIR/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		ePharma Disconnected is also known as Pharma Field Analytics. If you are upgrading or reinstalling, there may be a message about copying over Corda files.

Table 26. Prompts for Complete Siebel Analytics Applications Installation Under UNIX

Prompt	Default	Notes
Preparing to install		
Extracting the installation resources from the installer archive		
Configuring the installer for this system's environment		
Launching installer		
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 $INSTALLDIR/Install.log		

Installing Partial Analytics Applications (UNIX)

This section is part of the process "Installing Siebel Analytics Components (UNIX)."

This section lists the prompts for the types of partial Siebel Analytics Applications installations for UNIX platforms.

NOTE: Incremental installation of Siebel Analytics components is not supported under UNIX. If you decide later to add additional components, you will need to uninstall Siebel Analytics first.

The partial installations are detailed in the following sections:

- "Installing Siebel Analytics Server Only for Analytics Applications (UNIX)" on page 94
- "Installing Analytics Client Only for Analytics Applications (UNIX)" on page 95
- "Installing Siebel Analytics Web Only for Analytics Applications (UNIX)" on page 96
- "Installing Scheduler Only for Analytics Applications (UNIX)" on page 98
- "Installing Cluster Controller Only for Analytics Applications (UNIX)" on page 99
- "Installing Siebel Data Warehouse Only (UNIX)" on page 100

Installing Siebel Analytics Server Only for Analytics Applications (UNIX)

The prompts for the Siebel applications installation of Siebel Analytics Server only for UNIX platforms are listed in Table 27 on page 94.

Table 27. Prompts for Siebel Applications Installation of Siebel Analytics Server Only for UNIX

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 $INSTALLDIR.
Is $INSTALLDIR correct?	y/n/q	
Cache Location	$INSTALLDIR/Data/Cache	500 MB free space required
Is $INSTALLDIR/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 $INSTALLDIR/Install.log		

Installing Analytics Client Only for Analytics Applications (UNIX)

The prompts for the Siebel applications installation of Siebel Analytics Client only for UNIX platforms are listed in Table 28 on page 95.

Table 28. Prompts for Siebel Applications Installation of Siebel Analytics Client Only for UNIX

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	
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 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 $INSTALLDIR/Install.log		

Installing Siebel Analytics Web Only for Analytics Applications (UNIX)

The prompts for the Siebel applications installation of Siebel Analytics Web and Siebel Analytics Client only for UNIX platforms are listed in Table 29 on page 96.

Table 29. Prompts for Siebel Applications Installation of Siebel Analytics Web and Siebel Analytics Client Only for UNIX

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	
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 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		

Table 29. Prompts for Siebel Applications Installation of Siebel Analytics Web and Siebel Analytics Client Only for UNIX

Prompt	Default	Notes
Installing PopChart		
Preparing SILENT Mode Installation		
PopChart Installation has been completed.		
Installing Siebel Analytics components.		
Installation done!		
The Install Log is located at $INSTALLDIR/Install.log		

Installing Scheduler Only for Analytics Applications (UNIX)

The prompts for the Siebel applications installation of Siebel Analytics Scheduler only for UNIX platforms are listed in Table 30 on page 98.

Table 30. Prompts for Siebel Applications Installation of Siebel Analytics Scheduler Only for UNIX

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 $INSTALLDIR.
Is $INSTALLDIR correct?	y/n/q	
Cache Location	$INSTALLDIR/Data/Cache	500 MB free space required
Is $INSTALLDIR/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	
Installing Siebel Analytics components.		
Installation done!		
The Install Log is located at $INSTALLDIR/Install.log		

Installing Cluster Controller Only for Analytics Applications (UNIX)

The prompts for the Siebel applications installation of Siebel Analytics Cluster Controller only for UNIX platforms are listed in Table 31 on page 99.

Table 31. Prompts for Siebel Applications Installation of Siebel Analytics Cluster Controller Only for UNIX

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	
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 Data Warehouse Only (UNIX)

The prompts for the installation of Siebel Data Warehouse only under UNIX platforms are listed in Table 32 on page 100.

Table 32. Prompts for Installation of Siebel Data Warehouse Only Under UNIX

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!		

NOTE: After the installation, copy the file license.key to the directory $INSTALLDIR/DAC/license.

Inserting Your Siebel Analytics Web License Keys (UNIX)

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.

To insert your Siebel Analytics Web license key under UNIX

- Copy the analyticsweblicense.xml file to the /web/config subdirectory in the data directory on the machines that run Siebel Analytics Web components.

  The default name of the data directory is $INSTALLDIR/Data.

Proceed to Chapter 8, "Configuring Siebel Analytics in the UNIX Environment."

8 Configuring Siebel Analytics in the UNIX Environment

After the Siebel Analytics installer script is finished, there may be a number of additional tasks you must complete in order to properly configure Siebel Analytics under UNIX.

The number of postinstallation 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 fewer configuration tasks to perform than if you are installing a Siebel Analytics Industry Application with a Siebel Data Warehouse, with several localized languages.

This chapter describes the process of configuring the installed Siebel Analytics server components, as shown in the following topics:

- "UNIX Scripts for Basic Siebel Analytics Server Settings" on page 104
- "Starting or Restarting the Servers (UNIX)" on page 107
- "Configuring Native Databases (UNIX)" on page 108
- "Configuring Siebel Analytics Server (UNIX)" on page 120
- "Postinstallation Tests of Analytics Client and Server (UNIX)" on page 123
- "Process of Configuring Siebel Analytics Web (UNIX)" on page 125
- "Process of Configuring the Analytics Web and HTTP Servers (UNIX)" on page 126
- "Troubleshooting the Siebel Analytics Installation (UNIX)" on page 136

NOTE: It is necessary to install some components on Windows platforms, therefore UNIX administrators must read parts of the Windows chapters as well. See "Windows Requirements for UNIX Platforms" on page 75.

UNIX Scripts for Basic Siebel Analytics Server Settings

Scripts are provided for basic UNIX settings of Siebel Analytics Server. The following topics describe the scripts:

- "Siebel Analytics Scripts for Korn, Bourne, or Bash Shells" on page 104
- "Siebel Analytics Scripts for C Shell" on page 106

Siebel Analytics Scripts for Korn, Bourne, or Bash Shells

The Analytics scripts for Korn, Bourne, or bash shells are shown in Table 33 on page 104.

Table 33. Siebel Analytics Scripts For Korn, Bourne, or bash Shells

Script	Purpose
run-sa.sh start	Automatically calls sa.sh and user.sh and starts the Siebel Analytics Server.
run-sa.sh stop	Stops the Siebel Analytics Server.
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. **NOTE:** This file sets environment variables and must be executed appropriately for those variables to be exported to the current shell. Usage: `. sa.sh`
run-saw.sh start	Automatically calls saw.sh and starts the Siebel Analytics Web Server.
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.
run-sch.sh	Starts the Scheduler. Usage: `run-sch.sh { start | stop -p <password>}` **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.

Table 33. Siebel Analytics Scripts For Korn, Bourne, or bash Shells

Script	Purpose
run-ccs.sh	Starts the cluster controller. Usage: `run-ccs.sh { start | stop | forcestop }`
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. **NOTE:** This file sets environment variables and must be executed appropriately for those variables to be exported to the current shell. Usage: `. sa-cli.sh`
sa-init.sh	Sets up basic Siebel Analytics Server settings. Run this command to keep settings up to date after you make any changes to .reg files. These changes include changes to files used by the Siebel Analytics Web (for example, when you change the Web Catalog path).
user.sh	Sets up user-specific items such as the database. You do not need to run this script separately. It is called from run-sa.sh.

Siebel Analytics Scripts for C Shell

The Analytics scripts for C shell are shown in Table 34 on page 106.

Table 34. Siebel Analytics Scripts For C Shell

Script	Purpose
run-sa.csh start	Automatically calls sa.csh and user.csh and starts the Siebel Analytics Server.
run-sa.csh stop	Stops the Siebel Analytics Server.
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. **NOTE:** This file sets environment variables and must be executed appropriately for those variables to be exported to the current shell. Usage: `source sa.csh`
run-saw.csh	Automatically calls saw.csh and starts the Siebel Analytics Web Server.
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.
run-sch.csh	Starts the Scheduler. Usage: `run-sch.csh { start | stop -p <password>}` **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.
run-ccs.csh	Starts the cluster controller. Usage: `run-ccs.csh { start | stop | forcestop }`
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. **NOTE:** This file sets environment variables and must be executed appropriately for those variables to be exported to the current shell. Usage: `source sa-cli.csh`

Table 34. Siebel Analytics Scripts For C Shell

Script	Purpose
sa-init.csh	Sets up basic Siebel Analytics Server settings. Run this command to keep settings up to date after you make any changes to .reg files. These changes include changes to files used by the Siebel Analytics Web (for example, when you change the Web Catalog path).
user.csh	Sets up user-specific items such as the database. You do not need to run this script separately. It is called from run-sa.sh.

CAUTION: Do not disable the RPC service. If you attempt to start Siebel Analytics Server on a machine where the RPC services or processes are not running, the application will not start and no log will be generated.

Starting or Restarting the Servers (UNIX)

Starting or restarting servers under UNIX involves running the shell scripts listed in"UNIX Scripts for Basic Siebel Analytics Server Settings" on page 104.

NOTE: The order in which the services are stopped, then restarted, is important.

Use the following sequence.

1. Siebel Analytics Server service.
2. Siebel Analytics Web Server service.
3. Siebel Analytics Scheduler Server service.

Configuring Native Databases (UNIX)

This process describes the following tasks:

- "Locating the Database Setup Script (UNIX)" on page 108
- "Changing the Analytics Database Type" on page 111
- "Changing Database Connection Pool Settings (UNIX)" on page 112
- "Configuring DB2 Connect (UNIX)" on page 113
- "Setting the ORACLE_HOME Variable for Solaris" on page 114
- "Setting Oracle Databases for the Siebel Analytics Server Machine" on page 114
- "Configuring HP-UX with Oracle 9i Clients" on page 115
- "Configuring Siebel Server Data Sources (UNIX)" on page 116

Locating the Database Setup Script (UNIX)

This task is part of the "Configuring Native Databases (UNIX)."

You must verify the validity of the database setup script, because it is called from the Siebel Analytics startup script. Edit the file to include the environment settings for the database client of your choice.

Put your database-related setup script in the appropriate `file`:

- `$INSTALLDIR/setup/user.sh` —See Table 35 on page 109.

■ $INSTALLDIR/setup/user.csh —See Table 36 on page 110.

NOTE: The following two shell script excerpts are given as examples only and are not recommendations for particular software platforms. See *Siebel System Requirements and Supported Platforms*.

Table 35. Sample 1 (user.sh Excerpts)

Excerpts From user.sh

```
#For Oracle, Uncomment the following
# 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:$PATH
# export PATH
# SHLIB_LIBRARY_PATH=$ORACLE_HOME/lib:$SHLIB_PATH:/opt/j2se/jre/lib/hp700

#---------------------------
# DB2 Parameters
#---------------------------

# For DB2 Uncomment the following

# DB2_HOME=/opt/IBMdb2/
# export DB2_HOME
# export DB2DIR=/opt/IBMdb2/
# export SQLLIB=$DB2DIR/sqllib
# export DB2INSTANCE=an7u
# if [ -f $SQLLIB/db2profile ]; then
#    . $SQLLIB/db2profile
# fi
# SHLIB_PATH=$DB2DIR/lib:$DB2_HOME/lib:$SHLIB_PATH:/opt/j2se/jre/lib/hp700

#---------------------------
# export SHLIB_PATH
```

Table 36. Sample 2 (user.csh Excerpts)

Excerpts From user.csh
#For Oracle, Uncomment the following # ORACLE Parameters #---------- # 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 #---------- # For DB2 Uncomment the following # setenv DB2_HOME /opt/IBMdb2/ # setenv DB2DIR /opt/IBMdb2/ # 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 #----------

Changing the Analytics Database Type

This task is part of the "Configuring Native Databases (UNIX)."

If you are using other database types than the default shipped with Siebel Analytics, follow these steps to change the database type.

To change the database type

1. On a Windows computer, open the Server Administration Tool in offline mode.

   NOTE: For information on how to use the Server Administration Tool, see *Siebel Analytics Server Administration Guide*.

   By default, the user name 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 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 is 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, see *Siebel Analytics Server Administration Guide*.

5. Repeat Step 2 through Step 4 on page 111 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 logon, in order to prevent logon failures (for example, Pharma Initialization Blocks) for Siebel operational applications.

6. Save the repository.

NOTE: If you use AIX, HP-UX, or Solaris, perform the following additional step.

7. Copy the repository file to the AIX, HP-UX, or Solaris machine.

Changing Database Connection Pool Settings (UNIX)

This task is part of the "Configuring Native Databases (UNIX)."

The SiebelAnalytics.rpd application repository contains multiple, preconfigured database connections. By default the database type is IBM DB2. When you start the Siebel Analytics Server, you receive linker errors in the NQServer.log, such as the following:

```
[54009] Unable to create connection pool Internal System Connection Pool in
repository Star.ld.so.1: /t3fs4/AN1393/SiebelAnalytics/Bin/nqsserver.exe: fatal:
libdb2.so.1: open failed: No such file or directory

[nQSError: 46029] Failed to load the DLL /t3fs4/AN1393/SiebelAnalytics/Bin/
libnqsdbgatewaydb2cli35.so. Check if 'DB2 CLI' database client is installed.
```

This behavior is expected.

You must reconfigure all the database connections appropriate to your environments. This includes changing the database types and updating the user names and passwords. (In addition, while testing the Siebel Analytics Server installation, 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 versions of Siebel Analytics.)

NOTE: Connection pool settings can be changed only in the Server Administration Tool, which is available only under Windows platforms. Edit the repository on a Windows platform and transfer it to the UNIX platform using FTP.

The connection pools are described briefly in "Changing Database Connection Pool Settings" on page 54.

Configuring DB2 Connect (UNIX)

This task is part of the "Configuring Native Databases (UNIX)."

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 machine 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.

   NOTE: Be sure to use backslashes to pass the quote marks as part of the string.

   The following example uses an 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
   ```

Setting the ORACLE_HOME Variable for Solaris

This topic is part of the "Configuring Native Databases (UNIX)."

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. See *Siebel System Requirements and Supported Platforms*.

Setting Oracle Databases for the Siebel Analytics Server Machine

This topic is part of the "Configuring Native Databases (UNIX)."

If your native database is Oracle, the machine running Siebel Analytics Server must have the Siebel Analytics supported Oracle Client installed. In the tnsnames.ora file, the defined entry name must match the Data Source Name used in the connection pools used in all Siebel Analytics repository physical Oracle databases. That is, the following two conditions must be true:

- In the tnsnames.ora file, the Oracle database alias must be the same as the CONNECT_DATA setting.
- In the .rpd file, the Oracle database alias used in the connection pools must also be the same as the Data Source Name.

To check your repository connection pool settings against the Oracle tnsnames.ora settings, see the procedure in "Configuring Oracle Databases for the Siebel Analytics Server Machine" on page 71.

Configuring HP-UX with Oracle 9i Clients

This topic is part of the "Configuring Native Databases (UNIX)."

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.

   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.

   - For user.sh:

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

   - For user.csh:

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

Configuring Siebel Server Data Sources (UNIX)

For Siebel Analytics applications running under UNIX platforms, the following tasks are part of the "Configuring Native Databases (UNIX)."

- "Configuring ODBC Data Source for Analytics (UNIX)" on page 116
- "Configuring Teradata Data Source for Analytics (UNIX)" on page 116

Configuring ODBC Data Source for Analytics (UNIX)

This task is required if NQSODBC is to be configured as the only data source of Siebel Server.

NOTE: The Siebel Analytics application must already be installed.

To configure NQSODBC as the single Siebel Server data source

1. Log on as a separate telnet session.
2. Go to the Siebel Analytics installation `/setup` directory.
3. Run the following script:

   ```
   saodbc_init.sh -s [Siebel Server Root] -a [Analytics Root].
   ```

   The script modifies Siebel Server files siebenv.sh, siebenv.csh, registry, and sys/.odbc.ini to include the correct path and environment variable entries.
4. Resource siebenv.csh or siebenv.sh and run odbcsql to verify the ODBC connection.

Configuring Teradata Data Source for Analytics (UNIX)

This task is required if Teradata is to be configured as the only data source of Siebel Server.

NOTE: The Siebel Analytics application must already be installed.

Before beginning the following procedure, you must know the following information:

- The default installation directory paths for Teradata on UNIX, as shown in the following table of Teradata installation default paths under UNIX:

Platform	Default Installation Path
Solaris, HP/UX	/usr/odbc
AIX	/usr/lpp/tdodbc

- The IP address of the Teradata server.

To configure Teradata as a Siebel Server data source

1. Log on as a separate telnet session.
2. Go to the Siebel Analytics installation /setup directory.
3. Using vi or another text editor, open the odbc.ini file.

   Add the following section to odbc.ini:

```
[Name of the DSN]
Driver=<Teradata ODBC driver Path>/drivers/tdata.so
Description=NCR 3600 running Teradata V2R5.2
DBCName=<Teradata Server IP Address>
LastUser=
Username=
Password=
Database=
DefaultDatabase=<name of target database or user>
```

   Example 1.

   Assume the following:

   - Teradata's server is running on IP 172.20.129.42
   - The Teradata ODBC driver is installed at /usr/odbc

   You add the following section to odbc.ini:

```
[Terav502]
Driver=/usr/odbc/drivers/tdata.so
Description=NCR 3600 running Teradata V2R5.2
DBCName=172.20.129.42
LastUser=
Username=
Password=
Database=
DefaultDatabase=<name of target database or user>
```

Example 2.

Assume the following:

- Teradata's server is running on IP 172.20.129.42
- The Teradata ODBC driver is installed on /usr/lpp/tdodbc

Add the following section to odbc.ini:

```
[Terav502]
Driver=usr/lpp/tdodbc/odbc/drivers/tdata.so
Description=NCR 3600 running Teradata V2R5.2
DBCName=172.20.129.42
LastUser=
Username=
Password=
Database=
DefaultDatabase=<name of target database or user>
```

NOTE: The DefaultDatabase parameter may be left empty only if you have checked the entry *Require fully qualified table names* in the Repository Connection Pool for this Data Source.

4 In the same file, in the section [ODBC Data Sources], add the following entry:

```
Terav502=tdata.so
```

Example.

The new Teradata DSN is Terav502. Therefore, add the DSN entry:

```
[ODBC Data Sources]
AnalyticsWeb=Siebel Analytics Server
SnowFlake=Siebel Analytics Server
AutoSnowFlake=Siebel Analytics Server
DimSnowFlake=Siebel Analytics Server
DimSnowFlake=Siebel Analytics Server
Star=Siebel Analytics Server
Terav502=tdata.so
```

5 Open up the user.sh script in the same directory and add the library path line (based on the operating system and shell) to configure the Siebel Analytics data source, as shown in the following table of library path commands:

Operating System	Shell	Library Path
AIX	Korn Bourne bash	`LIBPATH=$LIBPATH:/usr/lpp/tdodbc/odbc/drivers:/usr/lpp/tdodbc/odbc/` `lib export LIBPATH`
	C	`setenv LIBPATH $LIBPATH: /usr/lpp/tdodbc/odbc/drivers:/usr/lpp/tdodbc/odbc/lib`
Solaris	Korn Bourne bash	`LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/odbc/drivers:/usr/odbc/lib` `export LD_LIBRARY_PATH`
	C	`setenv LD_LIBRARY_PATH $LD_LIBRARY_PATH:/usr/odbc/drivers:/usr/odbc/lib`

6 Using the Siebel Analytics Administration Tool, open the Repository and add the new DSN you created as the Connection Pool Data Source Name for the appropriate physical databases.

In the example, add Terav502.

7 Start the Analytics server or, if it is running, stop and restart it.

Configuring Siebel Analytics Server (UNIX)

This process describes the configuration of the Siebel Analytics Server under UNIX.

- "Localizing Sort Order Settings (UNIX)" on page 120
- "Updating Configuration Settings (UNIX)" on page 122

Localizing Sort Order Settings (UNIX)

If you are localizing your deployment of Siebel Analytics, this topic is part of the process "Configuring Siebel Analytics Server (UNIX)."

The NQSConfig.INI file General section contains those parameters required for localization, internationalization and other default parameters used to determine how data is returned from the Siebel Analytics Server to a client.

The Analytics Server sets the C-runtime locale during server startup. If you are localizing your deployment of Siebel Analytics, you must configure the settings for the following parameters:

- LOCALE
- SORT_ORDER_LOCALE
- SORT_TYPE
- CASE_SENSITIVE_CHARACTER_COMPARISON

These settings are interrelated and help determine how the Siebel Analytics Server sorts data. For all locale settings, see "Parameters in the Configuration File General Section" on page 294. For the UNIX-specific SORT_ORDER_LOCALE parameter settings, see "Setting SORT_ORDER_LOCALE (UNIX)" on page 122. For details of all server parameters, see Appendix A, "NQSConfig.INI File Reference."

Table 37 on page 121 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).

Table 37. SORT_ORDER_LOCALE Parameter Settings for UNIX Platforms

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
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
Korean	ko_KR.UTF-8	KO_KR.UTF-8	ko_KR.utf8
Portuguese	pt_PT.UTF-8@euro	PT_PT.UTF-8	univ.utf8

NOTE: The SORT_ORDER_LOCALE Settings table is valid for 7.5.3 and later releases.

If you do not have the proper locale installed, the Siebel Analytics Server does not start, and the NQSServer.log file contains the following error:

[47013] NLS locale *xxx* is not supported by the operating system.

In this error message, *xxx* is the locale specified in the NQSConfig.INI file for the SORT_ORDER_LOCALE parameter. The responses to this error shown in Table 38 on page 122.

Table 38. Responses to NQSServer.log file error 47013

Platform	Response to Error
UNIX	Install the locale indicated in the table for the requested language.
Windows	Add the corresponding language pack using the Regional Settings dialog box.

Setting SORT_ORDER_LOCALE (UNIX)

A value for the C-runtime locale during server startup is specified using the SORT_ORDER_LOCALE parameter in the NQSConfig.INI file. This parameter is set according to the following procedure.

To set the SORT_ORDER_LOCALE parameter under UNIX

1. Stop the Siebel Analytics Server.
2. Using a text editor, open the NQSConfig.INI file.

   The NQSConfig.INI file is located in the $INSTALLDIR/Config directory.
3. In the General section, at the SORT_ORDER_LOCALE parameter, enter a platform-independent name and the corresponding platform-specific name, as shown in Table 37 on page 121.
4. Save and close the NQSConfig.INI file.
5. Restart the Siebel Analytics Server.

Updating Configuration Settings (UNIX)

This step is normally executed automatically after installation. However, if you want to configure a new installation or to reconfigure the settings with your changes to the registry or instanceconfig.xml files, this topic becomes part of the process "Configuring Siebel Analytics Server (UNIX)."

To update the configuration settings under UNIX

- Run one of the following scripts.

Shell	Command
Bourne, Korn, or bash	sa-init.sh
C	sa-init.csh

Postinstallation Tests of Analytics Client and Server (UNIX)

After installing Siebel Analytics, you should perform test of the Siebel Analytics Server and Siebel Analytics Server installations, as detailed in the following topics:

- "Testing the Siebel Analytics Server Installation (UNIX)" on page 123
- "Testing the Analytics Client Installation (UNIX)" on page 123

Testing the Siebel Analytics Server Installation (UNIX)

To test the server setup, use the following procedure.

To test the Siebel Analytics Server installation under 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 UNIX shell commands shown in the following table.

UNIX Shell Used	Command
Korn, Bourne, or bash	`./run-sa.sh start`
C	`run-sa.csh start`

Testing the Analytics Client Installation (UNIX)

To test the Siebel Analytics client setup, use the following procedure.

To test the Siebel Analytics client installation

1. Run Siebel Analytics Client by opening another session. From the setup directory `$INSTALLDIR/setup`, run one of the UNIX shell commands shown in the following table.

UNIX Shell Used	Command
Korn, Bourne, or bash	`. sa-cli.sh`
C	`source sa-cli.csh`

   To test the client/server connectivity, run:

   ```
   nqcmd.exe
   ```

2. If the test is successful, press the Enter key several times to quit nqcmd.exe.

   If the test is not successful, proceed to Step 3 on page 124.

3 Make sure all clients are disconnected from the Siebel Analytics Server, and then stop the server by running one of the UNIX shell commands shown in the following table.

UNIX Shell Used	Command
Korn, Bourne, or bash	`run-sa.sh { start | {stop -d <data source name> -u <user name> -p <password>}}`
C	`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
```

Process of Configuring Siebel Analytics Web (UNIX)

This process 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 the following topics.

- "Configuring a Custom Name for a Virtual Web Server" on page 125
- "Process of Configuring the Analytics Web and HTTP Servers (UNIX)" on page 126
- "Creating a WebARchive (WAR) File for Siebel Analytics Web" on page 127
- "Process of Installing Siebel Analytics Web on Sun ONE Web Server (Solaris)" on page 128
- "Configuring Apache Tomcat Web Server for Stand-Alone Analytics (UNIX)" on page 131
- "Changing the Account Under Which a Windows Service Runs" on page 150

NOTE: The credentials for the Analytics Web user should be identical to the permissions for the user running all Siebel Analytics processes.

Configuring a Custom Name for a Virtual Web Server

When setting up a virtual Web server, the web-apps.xml file uses the following path:

```
<web-app uri="/Analytics" dir="$INSTALLDIR/Web/app"/></ vs>
```

This path invokes the application as http://<*host:port*>/Analytics. However, if you want to invoke the application as a virtual IP address, you must use the following procedure to change the IP address.

To change the Web server virtual IP address

1. Open the web-apps.xml file.
2. Configure the <web-app uri= setting as follows:

   ```
   <web-app uri="/CUSTOM" dir="$INSTALLDIR/Web/app"/></ vs>
   ```

   where CUSTOM represents a different virtual IP address.
3. Change the Web Server parameter for iBots.

   In schconfig.exe > Configure iBots, set the following value:

   ```
   http://<host:port>/CUSTOM/saw.dll
   ```

   where CUSTOM represents the virtual IP address specified in the web-apps.xml uri path.

Process of Configuring the Analytics Web and HTTP Servers (UNIX)

The UNIX version of Siebel Analytics Web consists of the Siebel Analytics Web Server and the Web (or HTTP) server running as separate processes.

- The Analytics Web Server process (the Web server executable) hosts most of the business logic of Siebel Analytics Web and performs all the functions.
- The Web (HTTP) server is a J2EE application server that hosts a 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 conforms to the Java Servlet 2.2 specification, and therefore part of the installation process involves deployment of this servlet.

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

After installing and configuring Siebel Analytics Web, the general process of Configuring the Analytics Web server with the HTTP server is as follows:

1. Configure a Web server.
2. Create a link to the Web server from one of the third-party Web servers.

The tasks involved for configuring each type of Web server are shown in the following topics:

- "Configuring a Custom Name for a Virtual Web Server" on page 126
- "Creating a WebARchive (WAR) File for Siebel Analytics Web" on page 127
- "Process of Installing Siebel Analytics Web on Sun ONE Web Server (Solaris)" on page 128

Configuring a Custom Name for a Virtual Web Server

When setting up a virtual Web server, the web-apps.xml file uses the following path:

```
<web-app uri="/Analytics" dir="$INSTALLDIR/Web/app"/></ vs>
```

This path invokes the application as http://*<host:port>*/Analytics. However, if you want to invoke the application as a virtual IP address, you must use the following procedure to change the IP address.

To change the Web server virtual IP address

1. Open the web-apps.xml file.
2. Configure the <web-app uri= setting as follows:

   ```
   <web-app uri="/CUSTOM" dir="$INSTALLDIR/Web/app"/></ vs>
   ```

   where CUSTOM represents a different virtual IP address.

3 Change the Web Server parameter for iBots.

In schconfig.exe > Configure iBots, set the following value:

```
http://<host:port>/CUSTOM/saw.dll
```

where CUSTOM represents the virtual IP address specified in the web-apps.xml uri path.

Creating a WebARchive (WAR) File for Siebel Analytics Web

This task is part of the "Process of Configuring the Analytics Web and HTTP Servers (UNIX)."

The specific WAR file you create depends on the Web application server you are using.

NOTE: You may need to have access to a JDK (not just a JRE) for creating the WAR file.

To create a WAR file

1 Stop the Web server.

2 Start a shell session to the machine that has Siebel Analytics Web installed.

3 Navigate to the Siebel Analytics installation directory.

For example: /usr/local/SiebelAnalytics

NOTE: The following examples use Bourne shell syntax and assume Java is installed at /usr/java14.

4 Use one of the following commands to determine the JAVA_HOME environment value:

```
set | grep JAVA_HOME
```

or

```
echo $JAVA_HOME
```

5 Set the JAVA_HOME environment variable to the root of your Java installation:

```
JAVA_HOME=/usr/java14; export JAVA_HOME
```

6 Run the jar command to create the WAR file:

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

NOTE: You must include the period at the end of the command.

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

This task is part of the "Process of Configuring the Analytics Web and HTTP Servers (UNIX)."

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.

NOTE: The third-party product referred to in this topic is now called Sun ONE, but the installation paths and directories refer to its older name, iPlanet.

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

- "Creating a New Virtual Server on Sun ONE" on page 128
- "Editing the web-apps.xml File on Sun ONE" on page 129
- "Testing the Sun ONE Web Server" on page 130
- "Configuring Sun ONE for Analytics Disconnected Client" on page 130

Creating a New Virtual Server on Sun ONE

This task is part of the "Process of Installing Siebel Analytics Web on Sun ONE Web Server (Solaris)."

NOTE: If you are using Sun ONE as your virtual Web server, the Java options need to be set correctly, especially if Sun ONE is using an older version of the Java Virtual Machine. If you receive error messages when trying to access the Siebel Analytics Web URL, you must change the Sun ONE global settings to the correct Java paths.

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.
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

This task is part of the "Process of Installing Siebel Analytics Web on Sun ONE Web Server (Solaris)."

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 as shown in the following procedure.

To edit the web-apps.xml file

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

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

   NOTE: The third-party product referred to is Sun ONE, but the installation paths and directories refer to its older name, iPlanet.

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 following line between the <vs> and </vs> tags:

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

   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 stop it now.

   Use the Administration Console or the stop script in your virtual server directory.

Testing the Sun ONE Web Server

This task is part of the "Process of Installing Siebel Analytics Web on Sun ONE Web Server (Solaris)."

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 "Restarting the Servers (UNIX)" on page 149.)

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 is:

   ```
   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.

Configuring Sun ONE for Analytics Disconnected Client

If you are using Sun ONE on Solaris as the Web server supporting Analytics Disconnected Client laptop machines, you must further configure Sun ONE Web server as shown in the following procedure.

NOTE: The third-party product referred to is Sun ONE, but the installation paths and directories refer to its older name, iPlanet.
This procedure assumes that Sun ONE is installed in $INSTALLDIR.

To configure Sun ONE as a Web server for Disconnected

1. Open the server.xml file in the directory /$INSTALLDIR/https-localhost/config.

2. In the server.xml file, change the following line:

   ```
   <CONNECTIONGROUP id="group1" matchingip="default" servername="localhost"
   defaultvs="https-localhost"/> NOTICE: servername is localhost
   ```

   to

   ```
   <CONNECTIONGROUP id="group1" matchingip="default" servername="<machine_name>"
   defaultvs="https-localhost"/> NOTICE: servername is actual name of the machine.
   ```

3. Save and close the server.xml file.

Configuring Apache Tomcat Web Server for Stand-Alone Analytics (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.

Siebel Analytics Web requires slightly different versions of the JDK/JRE on the various platforms on which it is supported. Siebel Analytics Web has not been certified for all Java versions. The versions required are listed in *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.

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

NOTE: In the following procedure, the example uses Tomcat version 4 installed at /usr/local/jakarta-tomcat-4. The exact text you use varies depending on your particular deployment.

To configure Siebel Analytics Web on Apache Tomcat under 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.

Testing the Tomcat Web Server Installation (UNIX)

Use the following procedure to test your Tomcat Web server configuration.

NOTE: The example uses Tomcat version 4 installed at /usr/local/jakarta-tomcat-4. The exact text you use varies depending on your particular deployment.

To test the Tomcat Web server installation under UNIX

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 this example, 8080) is that on which a default installation of Tomcat listens. If your installation of Tomcat uses a different port, you need to change this value.

Background Topics for Configuring Analytics in UNIX Environments

The following topics give more information on the procedures in this chapter:

- "About Editing the Siebel Analytics Initialization File Under UNIX" on page 133
- "About the instanceconfig.xml File and Siebel Analytics Web Under UNIX" on page 134
- "About the Siebel Analytics Web ODBC DSN" on page 134
- "About the Siebel Analytics Web Catalog Under UNIX" on page 134
- "About Updating Row Counts in Native Databases."
- "About Siebel Analytics Server Environment Variables for IBM AIX."
- "Troubleshooting the Siebel Analytics Installation (UNIX)" on page 136

About Editing the Siebel Analytics Initialization File Under UNIX

The Siebel Analytics Server software uses an initialization file to set parameters upon startup. This initialization file is the NQSConfig.INI file. Under UNIX platforms, this file is located in $INSTALLDIR/Config. 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.

For more information on changing the NQSConfig.INI file, see "Changing Siebel Analytics Configuration File Parameter Entries" on page 288.

About the instanceconfig.xml File and Siebel Analytics Web Under 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 under UNIX platforms. You can customize Siebel Analytics Web by modifying the entries in instanceconfig.xml and adding new entries to override internal default settings. For UNIX, this file is located at $INSTALLDIR/Data/web/config.

If you make changes, you must run certain shell scripts before the changes take effect. See "Updating Configuration Settings (UNIX)" on page 122.

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*.

About 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*.

NOTE: Siebel Analytics Web must use a single DSN.

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. For information about updating the configuration file, see *Siebel Analytics Web Administration Guide*.

About the Siebel Analytics Web Catalog Under 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 in the $INSTALLDIR/Data/web/catalog folder when you install an integrated version from the Apps_Windows or Apps_UNIX folders.

If you are upgrading from an earlier version of Siebel Analytics, first see *Siebel Analytics Web Administration Guide* before installing Siebel Analytics.

About Updating Row Counts in Native Databases

This topic applies if you are using the Update Rowcount functionality and running a heterogeneous environment, such as Siebel Analytics Server and database under UNIX, while remote Administrator users run the Server Administration Tool on Windows machines.

When using the Update Rowcount functionality, the Server Administration Tool uses local ODBC sources on the client machine, *not* the server ODBC sources. Therefore, Oracle or DB2 data sources must be configured on the Windows machine running Server Administration Tool so that the following conditions are true:

- Data sources point to the same DBMS identified in the Siebel Analytics user.csh or user.sh file on the UNIX server.
- The name of the local data source also must match the name of the data source defined in the Connection Pool object in the physical layer of the Siebel Analytics repository (.rpd) file.

If these conditions are not true, and if the server and client data sources are pointing at different databases, then erroneous updated row counts or incorrect results appear.

About Siebel Analytics Server 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=IGNOREUNLOAD@LOADPUBLIC@PREREAD_SHLIB@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
unset RT_GRQ
export SPINLOOPTIME=1000
export YIELDLOOPTIME=4
export MALLOCMULTIHEAP=considersize,heaps:4
export MALLOCTYPE=buckets
```

CAUTION: 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, or it may crash.

Troubleshooting the Siebel Analytics Installation (UNIX)

This topic describes some common problems observed during installations and suggests possible solutions. To resolve the problem, look for it in the Symptom/Error Message column in Table 39 on page 136.

For some components, such as PopChart Image Server, that are installed under Windows platforms only, see also "Troubleshooting the Siebel Analytics Installation (Windows)" on page 49.

Table 39. Common Problems and Solutions During Installation Under UNIX

Symptom/Error Message	Diagnostic Steps/Cause	Solution
The Siebel Analytics Server startup operation fails.	Look in the log files for messages indicating possible reasons. Log files are located in the `$INSTALLDIR/Log/` subdirectory. You can use a text editor to view a log 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.
	You are running a localized installation on AIX.	For AIX platforms localized for Japanese, see "Changing Configuration File Settings for Japanese Localizations on AIX" on page 176.

Table 39. Common Problems and Solutions During Installation Under UNIX

Symptom/Error Message	Diagnostic Steps/Cause	Solution
Charts do not appear.	Analytics Web is unable to communicate with Corda PopChart Image Server (PCIS). **NOTE:** This note applies if you are upgrading from Siebel Analytics 7.5 versions. The location, structure, and content of the Corda image server directory have changed from Siebel Analytics version 7.5. The image server is now installed under the main installation directory. Also, the file key.txt is no longer required.	1 Make sure that PCIS is running. 2 Make sure that the port value of PCS_Port in `$INSTALLDIR/Corda51/config/server_config.txt` is the same as the port number specified in the `$INSTALLDIR/Data/web/config/instanceconfig.xml` setting: `WebConfig/ServerInstance/Charts/POP/ServerPrefix`. 3 Make sure that the Web or application server's name is valid and accessible from the user's browser. 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.
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.
Unable to log on to Siebel Analytics Web. Message: `Siebel Analytics ODBC returned the error: (No error info available)`	The Analytics Server process nqservice.exe is not running or is terminated abruptly.	Kill the process nqscomgateway.exe manually and restart the Analytics server by running the command `./run-sa.csh start` from the following location: `$INSTALLDIR/setup`.
Hourglass icon remains in processing state when trying to log on to Siebel Analytics Web.	This database that the user.csh file points to is incorrect, or is a corrupted database. This may also happen due to the abrupt disconnection of the database in the middle of processing.	Open the file user.csh (located at `$INSTALLDIR/setup`. Check for the database parameters. Using the command sqlplus, check whether or not the connection is being established.

Table 39. Common Problems and Solutions During Installation Under UNIX

Symptom/Error Message	Diagnostic Steps/Cause	Solution

When starting the Scheduler, you receive an error.	Set the DISPLAY variable for Scheduler.	■ For Korn, Bourne, or bash shells:
		`export DISPLAY=ip_address:0`
		■ For C shell:
		`setenv DISPLAY=ip_address:0`

No Login Screen - No Errors	Incorrect configuration or incomplete shutdown/ memory allocation.	■ Make sure that Web server is running. ■ Make sure that the empty.htm file in the installed virtual server can be accessed from a browser. If this fails, the virtual server 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.
nQSError: 77006 (Not Found: The requested object does not exist on this server...)	Siebel Analytics Web Server parameter is not set correctly in schconfig.exe— Configure iBots.	Make sure that the Siebel Analytics virtual Web server is correctly configured. Reconfigure the Siebel Analytics Web Server parameter as `http://<host:port>/CUSTOM/saw.dll`, where CUSTOM is the custom path specified in web-apps.xml. See "Configuring a Custom Name for a Virtual Web Server" on page 125.
The URL http://<server:port>/analytics results in a server error, and Web server logs contain errors about JSP compilation.	The Web server is unable to access a scratch directory to handle the JSP.	Set up a Web server scratch directory. See "Testing the Tomcat Web Server Installation (UNIX)" on page 132.

9 Administering Analytics Servers

This chapter contains topics applicable to both Windows and UNIX platforms.

This chapter describes how the Siebel Analytics server commands interact with your operating system, while performing such tasks as the following:

- Stopping and starting servers
- Running the Windows services

  CAUTION: Siebel Analytics does not support more than one server instance on the same machine at one time.

- Using scripts

NOTE: For administration of the Siebel Analytics repository and Siebel Analytics Web catalog, see the *Siebel Analytics Server Administration Guide* and the *Siebel Analytics Web Administration Guide*.

The following topics describe administering Siebel Analytics servers:

- "Default Settings for Siebel Analytics Server Configuration Files" on page 140
- "Stopping the Analytics Servers" on page 147
- "Restarting the Analytics Servers" on page 149
- "Changing the Account Under Which a Windows Service Runs" on page 150
- "Setting Up a Servlet Container Web Server Scratch Directory (UNIX)" on page 150
- "Siebel Analytics Executable Files" on page 151

Default Settings for Siebel Analytics Server Configuration Files

When you install Siebel Analytics, the installer automatically sets some Analytics Server parameter. Table 42 on page 152 briefly summarizes these default settings. For the details of these parameter settings, see Appendix A, "NQSConfig.INI File Reference" and Appendix B, "NQClusterConfig.INI File Reference."

Table 40. Default Siebel Analytics Configuration File Settings

Section	Parameter	Default Value	Other Valid Values (if not binary) or Notes
Repository	Star	siebelanalytics.rpd	
Cache	ENABLE	YES	
	DATA_STORAGE_PATHS	\SiebelAnalyticsData\Temp\Cache	
	METADATA_FILE	\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	**NOTE:** Read Release Notes before setting to YES.
	METADATA_BACKUP_FREQUENCY_MINUTES	1440	

Table 40. Default Siebel Analytics Configuration File Settings

Section	Parameter	Default Value	Other Valid Values (if not binary) or Notes
General	LOCALE	English-usa	
	SORT_ORDER_LOCALE	english-usa	
	SORT_TYPE	binary	
	CASE_SENSITIVE_ CHARACTER_COMPARISON	OFF	Must match the remote target database.
	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	
	WORK_DIRECTORY_PATHS	\SiebelAnalyticsData \Temp	
	SORT_MEMORY_SIZE	4 MB	
	SORT_BUFFER_ INCREMENT_SIZE	256 KB	
	VIRTUAL_TABLE_PAGE_ SIZE	128 KB	
	USE_LONG_MONTH_ NAMES	NO	
	USE_LONG_DAY_NAMES	NO	
	UPPERCASE_USERNAME_ FOR_INITBLOCK	YES	
Security	DEFAULT_PRIVILEGES	READ	NONE
	PERFORM_OS_ AUTHENTICATION	YES	
	PROJECT_INACCESSIBLE_ COLUMN_AS_NULL	YES	
	MINIMUM_PASSWORD_ LENGTH	0	
	AUTHENTICATION_TYPE	NQS	■ DATABASE ■ BYPASS_NQS

Table 40. Default Siebel Analytics Configuration File Settings

Section	Parameter	Default Value	Other Valid Values (if not binary) or Notes
Server	SERVER_NAME	Siebel_Analytics_Server	
	MAX_SESSION_LIMIT	2000	
	MAX_REQUEST_PER_ SESSION_LIMIT	500	
	SERVER_THREAD_RANGE	40-100	
	SERVER_THREAD_STACK_ SIZE	0	
	DB_GATEWAY_THREAD_ STACK_SIZE	0	
	MAX_EXPANDED_ SUBQUERY_PREDICATES	8192	
	MAX_QUERY_PLAN_ CACHE_ENTRIES	1024	
	MAX_DRILLDOWN_INFO_ CACHE_ENTRIES	1024	
	MAX_DRILLDOWN_QUERY_ CACHE_ENTRIES	1024	
	INIT_BLOCK_CACHE_ ENTRIES	20	
	CLIENT_MGMT_THREADS_ MAX	5	
	RPC_SERVICE_OR_PORT	9703	
	ENABLE_DB_HINTS	YES	
	PREVENT_DIVIDE_BY_ ZERO	YES	

Table 40. Default Siebel Analytics Configuration File Settings

Section	Parameter	Default Value	Other Valid Values (if not binary) or Notes
Server (continued)	CLUSTER_PARTICIPANT	NO	If value is YES, add the following parameters: ■ REPOSITORY_PUBLISHING_DIRECTORY ■ REQUIRE_PUBLISHING_DIRECTORY
	REPOSITORY_PUBLISHING_DIRECTORY	<dirname>	Use when CLUSTER_PARTICIPANT = YES
	REQUIRE_PUBLISHING_DIRECTORY	YES	Use when CLUSTER_PARTICIPANT = YES
	DISCONNECTED	NO	
	AUTOMATIC_RESTART	YES	
Dynamic Library	ODBC200	nqsdbgatewayodbc	The dynamic libraries are categorized by the CLI they support.
	ODBC350	nqsdbgatewayodbc35	
	OCI7	nqsdbgatewayoci7	
	OCI8	nqsdbgatewayoci8	
	OCI8i	nqsdbgatewayoci8i	
	DB2CLI	nqsdbgatewaydb2cli	
	DB2CLI35	nqsdbgatewaydb2cli35	
	NQSXML	nqsdbgatewayxml	
	XMLA	nqsdbgatewayxmla	
User Log	USER_LOG_FILE_SIZE	10 MB	Logs query activity when enabled for a user.
	CODE_PAGE	UTF8	ANSI, 1252, and others.

Table 40. Default Siebel Analytics Configuration File Settings

Section	Parameter	Default Value	Other Valid Values (if not binary) or Notes
Usage Tracking	ENABLE	NO	Collects usage statistics on each logical query submitted to the Analytics Server.
	DIRECT_INSERT	YES	Inserts data into a table. If value is YES, also use the parameter PHYSICAL_TABLE_NAME.
	PHYSICAL_TABLE_NAME	<Database>.<Catalog>.<Schema>.<Table>	SQL Server databases use <Database>.<Catalog>.<Schema>.<Table> Oracle databases use <Database>.<Schema>.<Table>
	DIRECT_INSERT	NO	Writes data to a flat file. If value is NO, also use the parameter STORAGE_DIRECTORY.
	STORAGE_DIRECTORY	<full directory path>	Use when STORAGE_DIRECTORY = NO.
	CHECKPOINT_INTERVAL_MINUTES	5	
	FILE_ROLLOVER_INTERVAL_MINUTES	30	
	CODE_PAGE	UTF8	ANSI, 1252, and others.
Optimization Flags	STRONG_DATETIME_TYPE_CHECKING	ON	

Table 40. Default Siebel Analytics Configuration File Settings

Section	Parameter	Default Value	Other Valid Values (if not binary) or Notes
Cluster (found in NQCluster Confg.INI file)	ENABLE_CONTROLLER	NO	Analytics Server clustering is enabled via NQSConfig.INI.
	PRIMARY_CONTROLLER	<machine_name>	DNS 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> List up to 16 unique Siebel Analytics Server machines.
	MASTER_SERVER	<analytics_server_name>	DNS of the Analytics Server machine holding master copies of repositories. **NOTE:** Must be in SERVERS list.
	SERVER_POLL_SECONDS	5	Polling frequency: Analytics Server to Cluster Controller.
	CONTROLLER_POLL_SECONDS	5	Polling frequency: Cluster Controller to Cluster Controller.

Table 40. Default Siebel Analytics Configuration File Settings

Section	Parameter	Default Value	Other Valid Values (if not binary) or Notes
Cluster (continued)	CLIENT_SERVER_PORT	9703	Outfacing port for ODBC connections on the Analytics servers (called RCP_SERVICE_OR_PORT in the NQSConfig.INI file). Replaces SERVER_PORT. **NOTE:** Not registered with IANA; must be verified.
	CLIENT_CONTROLLER_ PORT	9706	Outfacing port for clustered ODBC connections on the Cluster Controllers. Replaces CONTROLLER_PORT. **NOTE:** Not registered with IANA; must be verified.
	MONITOR_CONTROLLER_ PORT	9700	TCP/UDP port for intracluster communication with clustered Analytics Servers. **NOTE:** Not registered with IANA; must be verified.
	MONITOR_SERVER_PORT	9701	
	SERVER_MANAGER_PORT	9702	Port used by the Server Manager. **NOTE:** Needed only on UNIX.

Stopping the Analytics Servers

Changes to the configuration (NQSConfig.INI) file, Web Catalog (SiebelAnalytics.webcat) file, the repository (.rpd) file, and other files require that the Siebel Analytics Server be stopped, then restarted, before those changes can take effect. The following topics describe how to stop the Siebel Analytics servers under both Windows and UNIX platforms:

- "Stopping Analytics Servers (Windows)" on page 147
- "Stopping Analytics Servers Normally (UNIX)" on page 147
- "Stopping Siebel Analytics Server When Regular UNIX Commands Fail" on page 148
- "Stopping Scheduler Server When Regular UNIX Commands Fail" on page 148

Stopping Analytics Servers (Windows)

Stopping servers under Windows involves running Windows Services.

To run Windows Services, use the command C:\WINDOWS\system32\services.msc or navigate to Start > Programs > Administrative Tools > Services.

To stop the servers under Windows

1. Stop the Siebel Analytics Web service.

   NOTE: This may take several minutes.

2. Stop the World Wide Web Publishing service.
3. Stop the Siebel Analytics Server service.

Stopping Analytics Servers Normally (UNIX)

This procedure is the regular method of stopping the servers under UNIX. The UNIX commands you use to start and shut down the servers depend on the UNIX shell being used.

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

The order in which the services are stopped, then restarted, is important.
Use the following sequence.

To stop the Siebel Analytics Servers using regular UNIX commands

1. Stop the Siebel Analytics Server service, using one the UNIX shell commands shown in the following table.

Shell	Order of Stopping	Command
■ Korn	1 Siebel Analytics Server	`run-sa.sh stop`
■ Bourne	2 Siebel Analytics Web Server	`run-saw.sh stop`
■ bash	3 Siebel Analytics Scheduler Server	`run-sch.sh stop -p <password>`

Shell	Order of Stopping	Command
■ C	1 Siebel Analytics Server	run-sa.csh stop
	2 Siebel Analytics Web Server	run-saw.csh stop
	3 Siebel Analytics Scheduler Server	run-sch.csh stop -p <password>

2 If the regular UNIX commands do not work, see the following topics:

- "Stopping Siebel Analytics Server When Regular UNIX Commands Fail" on page 148
- "Stopping Scheduler Server When Regular UNIX Commands Fail" on page 148

Stopping Siebel Analytics Server When Regular UNIX Commands Fail

When the Siebel Analytics Server starts, the process utilizes additional processes and resources that may fail to stop cleanly when the Siebel Analytics Server is shut down, for one of the following reasons:

- The environment has been set up with sa.sh or sa.csh, and you are using the command:

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

- Shared memory may be used by the user ID running Siebel Analytics Server.

  NOTE: Check IPC resources using the command ipcs, and use the command ipcrm to remove the resource.

If you cannot shut down the Siebel Analytics Server cleanly with the regular commands, use the following procedure.

To stop the Siebel Analytics Server using forcestop

1 Set up DISPLAY.

2 While running telnet, use one of the commands in the following table.

Shell	Command
Bourne, Korn, or bash	run-sa.sh forcestop
C	run-sa.csh forcestop

Stopping Scheduler Server When Regular UNIX Commands Fail

If the regular commands fail, you may run the following command:

- mwcleanup

Restarting the Analytics Servers

After you have made configuration changes to the Analytics server, you must restart the server for the changes to take effect. Restarting the Analytics server under both Windows and UNIX platforms is described in the following procedures:

- "Restarting the Servers (Windows)" on page 149
- "Restarting the Servers (UNIX)" on page 149

Restarting the Servers (Windows)

Stopping and starting servers under Windows involves running C:\WINDOWS\system32\services.msc.

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 logs an error in nqServer.log file in the Log directory.

To restart the servers under Windows

1. Restart the Siebel Analytics Server, which appears under Services.
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 user name 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.

Restarting the Servers (UNIX)

Starting servers under UNIX involves running the shell scripts listed in "UNIX Scripts for Basic Siebel Analytics Server Settings" on page 104. See the order for starting the servers in "Starting or Restarting the Servers (UNIX)" on page 107.

NOTE: The order in which the services are stopped, then restarted, is important.

Restarting the Siebel Analytics Server When a Database Goes Down

If a Siebel Analytics Server database goes down and is restarted, the users who were connected at the time of the drop will be unable to refresh or proceed, because the connection is lost. However, logging out and logging in again should fix this.

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, open the Services list.
2. Select the Siebel Analytics service and click Startup. The Service dialog box opens.
3. In the Log On As portion of the Services dialog, select the option This Account and then click the button to the right of the text box. The Add User dialog opens.
4. Select the user account in which you want the service to run, click Add, and then click OK.
5. Enter the password for the user in the Services dialog, 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 attempts to use the new account to start up the service.

Setting Up a Servlet Container Web Server Scratch Directory (UNIX)

The default server page for the Siebel Analytics Web servlet is default.jsp. The Web server tries to access a scratch directory to handle the Java server page. If there is no scratch directory set up, exceptions appear in the Web server logs. See your Web server documentation for how to set up a scratch directory or working directory for a Web application.

Siebel Analytics Executable Files

The installation 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.

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

- "Siebel Analytics Windows Command Utilities" on page 151
- "Siebel Analytics UNIX Command Utilities" on page 152

Siebel Analytics Windows Command Utilities

All of the executable files used as Siebel Analytics command utilities under Windows platforms are shown in Table 41 on page 151.

Table 41. Siebel Analytics Command Utilities Under Windows

Folder	Command
$INSTALLDIR\SiebelAnalytics\Bin	nQcmd.exe
	NQSChangePassword.exe
	nQSecUDMLGen.exe
	nQSShutDown.exe
	nQUDMLCli.exe
	nQUDMLExec.exe
	nQUDMLGen.exe
	SchConfig.exe
	SchShutdown.exe
	SASchInvoke.exe

Siebel Analytics UNIX Command Utilities

All of the executable files used as Siebel Analytics command utilities under UNIX platforms are shown in Table 42 on page 152.

Table 42. Siebel Analytics Command Utilities Under UNIX

Folder	Command
$INSTALLDIR/Bin	nqcmd.exe
	nqschangepassword.exe
	nqsecudmlgen.exe
	nqsshutdown.exe
	nqudmlcli.exe
	nqudmlexec.exe
	nqudmlgen.exe
	schconfig.exe
	schshutdown.exe

10 Configuring User Authentication and Security in Siebel Analytics

This chapter describes the configuration of LDAP and ADSI servers for user authentication and security in Siebel Analytics applications.

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

The main task of this chapter is described in the following section:

- "Process of Configuring LDAP and ADSI for Analytics Authentication" on page 154

The remainder of this chapter provides basic information about user authentication methods used by all implementations of Siebel Analytics, whether Stand-Alone or Integrated.

NOTE: The actual processes for configuring Siebel Analytics repositories and Web catalogs are covered in the *Siebel Analytics Server Administration Guide* and the *Siebel Analytics Web Administration Guide*.

User Authentication Support in Analytics

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

- Database authentication

  The Siebel Analytics repository is preconfigured for 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. Siebel Analytics Server supports authentication against multiple LDAP servers.

- ADSI (Active Directory Service Interfaces) authentication

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

  Siebel Analytics Server supports authentication against multiple Active Directory servers.

  NOTE: Siebel Analytics Server is still a LDAP client when it runs against ADSI.

Process of Configuring LDAP and ADSI for Analytics Authentication

If you authenticate Siebel Analytics users on an LDAP or ADSI server, see the following procedures.

- "Configuring IKeyMan for CMS Key Generation" on page 154

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

- "Generating a CMS Key Database File" on page 155
- "Setting Up LDAP Authentication" on page 156

Configuring IKeyMan for CMS Key Generation

This is a task of the "Process of Configuring LDAP and ADSI for Analytics Authentication."

IBM's IKeyMan, a Java-based tool, is used to create key database files for LDAP authentication over SSL (Secure Sockets Layer). A key database file stores digital certificates based on the X.509 standard.

IKeyMan 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.

NOTE: An IBM or an IBM-equivalent JDK must already be installed. The correct version of Java is required for IKeyMan to work properly. For supported versions of the Java runtime engine, see *Siebel System Requirements and Supported Platforms*.

To configure IKeyMan to enable creation of CMS key database files

1. Set JAVA_HOME to point to the directory where JDK was installed.

   For example:

   - On Windows, set JAVA_HOME=C:\Progam Files\IBM\Java131.
   - On UNIX, export JAVA_HOME=/usr/opt/IBMJava131.

2. Remove the gskikm.jar and ibmjcaprovider.jar files from your ${JAVA_HOME}/jre/lib/ext directory.
3. Make sure that ${JAVA_HOME}/jre/lib/ext has the following jar files:

   - ibmjceprovider.jar
   - ibmpkcs.jar
   - ibmjcefw.jar
   - local_policy.jar
   - US_export_policy.jar
   - ibmjlog.jar

- ibmjsse.jar

Copy these jar files from the GSKit installation path /classes/jre/lib/ext.

4 Register the 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 is in GSKit Installation path \classes\gsk_java.security.

Generating a CMS Key Database File

This is a task of the "Process of Configuring LDAP and ADSI for Analytics Authentication."

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 under Windows or gsk6ikm under 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.

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.

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

NOTE: This key file must be stored on all other machines used to connect to the LDAP server, such as the computer running the Server Administration Tool. Store the key file under the Siebel Analytics Server configuration directory (the directory containing NQSConfig.INI).

Generating CMS Key Database Files in GSKit 6

Releases of GSKit 6.x IKeyMan utility have certificates that expired January 6, 2004. This certificate expiration prevents IKeyMan from creating CMS key database files. If you are using GSKit 6.x, then perform one of the following procedures on the machine running IKeyMan.

Setting Back the System Clock

Before generating the CMS file, perform the following procedure to set back the system clock.

To create CMS files by setting back the system clock

1. Turn back the system clock on the machine to a date before January 6, 2004.
2. Run IKeyMan and create a CMS key database file.
3. Save this key database file as a CMS file.
4. Restore the system clock.

Creating and Converting Key Files

The following procedure first creates key files in another format, then converts them to CMS files.

To create non-CMS files without expired certificates

1. Run IKeyMan.
2. Create a key database file that is not of CMS type.

   For example: JKS, JCEKS and PKCS12.
3. Delete the expired certificates.
4. Save this key database file as a CMS file.

Setting Up LDAP Authentication

This is a task of the "Process of Configuring LDAP and ADSI for Analytics Authentication."

External authentication is determined by the presence of a defined session system variable USER. Associating USER with an LDAP initialization block determines that USER is authenticated by LDAP. Whenever a user logs into Siebel Analytics Server, the user name and password are passed to the LDAP server for authentication. After the user is authenticated successfully, other session variables for the user might also be populated from information returned by the LDAP server.

To configure LDAP authentication, you perform the following tasks:

- Create an LDAP initialization block.

  For details of how to create an initialization block, see the topics on session variables in *Siebel Analytics Server Administration Guide*.)
- Associate this initialization block with an LDAP server.
- Define a system variable called USER.

- Associate the USER system variable with the LDAP initialization block.

NOTE: 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 of how to set up other forms of authentication, see the topics on session variables in *Siebel Analytics Server Administration Guide*.)

Background Topics for Analytics User Authentication

The following topics give more information on the procedures in this chapter:

- "LDAP and ADSI Authentication in Siebel Analytics" on page 157
- "Levels of Security in Siebel Analytics" on page 159
- "Responsibilities and Access in Siebel Analytics Applications" on page 162

LDAP and ADSI Authentication in Siebel Analytics

Authentication on LDAP and ADSI servers uses Siebel Analytics session variables. Some session variables, such as PASSWORD, are populated automatically. They receive their values when a user begins a session by logging on. 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.

Some session variables, such as GROUP, need to be manually created in the Siebel Analytics repository. In the Analytics Server Administration Tool Variable Manager, you use initialization blocks to specify the attributes to be retrieved in session variables. Certain session variables, called *system* session variables, have special uses. (For more information about session variables, the USER system variable, and the Variable Manager, see the appropriate topics in *Siebel Analytics Server Administration Guide*.)

The following key restrictions apply to LDAP and ADSI authentication:

- Importing of user information into the repository is supported on regular LDAP servers, but not supported on ADSI servers.
- Groups are defined in the repository. However, if lists of users are stored on LDAP servers, the group membership information must be obtained from a database table.

About Using CMS Key Database Files for LDAP Authentication

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

- Server authentication
- Server and client authentication

Siebel Analytics Server uses server authentication. You must configure an 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.

GSKit (Global Security Kit)

Before configuring LDAP authentication, make sure that IBM's GSKit (Global Security Kit) is installed on the same machine as the Siebel Analytics Server, and that GSKit is configured for your operating system.

GSKit is a Java-based utility that provides CMS key database files for LDAP authentication over Secure Sockets Layer. (See *Siebel System Requirements and Supported Platforms* for the supported version of the Java runtime engine.)

NOTE: If GSKit is not already installed, see *Security Guide for Siebel Business Applications* for the installation procedure.

Levels of Security in Siebel Analytics

Two different levels of security configuration and authentication are supported by Siebel Analytics, Object-Level and Data-Level.

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 159.

- 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 160.

Metadata Object Level Security (Repository Groups) in Siebel Analytics

Metadata object security is configured in the Analytics repository (SiebelAnalytics.rpd) using the Server 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. For more information on object level security, see *Siebel Analytics Server Administration Guide*.

NOTE: In the shipped product, only permissions at the subject area level have been configured.

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.

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. See *Security Guide for Siebel Business 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,.

Other data security models such as custom models can be configured in the metadata using similar techniques. This security configuration requires an understanding of the business model setup and filtering mechanisms. See *Siebel Analytics Server Administration Guide* on using variables in the repository.

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 on 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 certain groups in 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 receive 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 are not 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

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.

Responsibilities and Access in Siebel Analytics Applications

Siebel Analytics applications security is based on Responsibilities and Siebel Analytics repository groups. Permission and access are always determined by user's memberships in various responsibilities. In this case, Responsibility is interchangeable with Repository group and Web Catalog group; they have a one-to-one correspondence.

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 is automatically be reflected in the repository as well as the Web Catalog. The user inherits the appropriate permissions from the responsibilities.

NOTE: Users are always created in the Siebel operational application database, never in the Siebel Analytics repository.

By default, certain responsibilities have been set up for Primary position-based security. Your deployments may require changing these responsibilities to Organization-based security. This is done in the repository using the Server Administration Tool.

11 Installing and Configuring Clustered Siebel Analytics Servers

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

- "Installation Requirements for the Analytics Cluster Server Feature" on page 164
- "Installing the Siebel Analytics Server Clustering Feature" on page 165
- "Installing the Server Clustering Feature" on page 168
- "Process of Configuring Clustered Servers, Clients, and Controllers" on page 169
- "Key Components of an Analytics Server Cluster" on page 172

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* on Siebel SupportWeb.

NOTE: The Cluster Server feature works for Siebel Analytics Server only. Analytics Web Server cannot be clustered in the same way as the Siebel Analytics Server, because metadata is stored in a single location (Web Catalog) on the Web server file system.

TIP: Although the Analytics Web Server itself cannot be clustered, Siebel Analytics Web contains utilities to support replication of Web catalog content among multiple Analytics Web servers. For more information about these Web Replication utilities, see Siebel Technical Note 579 on Siebel SupportWeb.

Installation Requirements for the Analytics Cluster Server Feature

The requirements of a clustered Siebel Analytics Server are shown in Table 43 on page 164.

Table 43. Installation Requirements for Clustered Siebel Analytics Servers

Component	Requirement
Software	All Siebel Analytics Server and cluster controller computers participating in the cluster need to run identical versions of the Siebel Analytics software.
Network	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.
Configuration	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.
	First configure one repository, and then copy it to the other Siebel Analytics Servers participating in the cluster.
Synchronization	The clock on each server participating in a cluster must be kept in synchronization. Out-of-sync clocks can skew some cluster-related reporting. ■ Windows: use a synchronization software program ■ UNIX: use a time daemon such as NTP

Installing the Siebel Analytics Server Clustering Feature

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

- "Identifying the Siebel Analytics Clustering Components" on page 165
- "Granting the Analytics Log On as a Service Right (Windows)" on page 166
- "Installing the Server Clustering Feature" on page 168

Identifying the Siebel Analytics Clustering Components

This task is part of the "Installing the Siebel Analytics Server Clustering Feature," and identifies the components of the cluster controller.

To identify the clustering components

1. Identify the computer that you use to host the primary cluster controller.

   Optionally, identify the computer you use to host the secondary cluster controller. See the parameters PRIMARY_CONTROLLER on page 319 and SECONDARY_CONTROLLER on page 319 in Appendix B, "NQClusterConfig.INI File Reference."

2. Identify each computer that hosts a clustered Siebel Analytics Server.

   See the parameter SERVERS on page 320 in Appendix B, "NQClusterConfig.INI File Reference."

3. Identify a Domain account under which all clustered Siebel Analytics Servers and cluster controllers run, having the following requirements:

   - Must be a member of the local Windows Administrators group on each computer in the cluster. Do not use the LocalSystem account.
   - Must have read and write access to the repository publishing directory (specified in the parameter REPOSITORY_PUBLISHING_DIRECTORY in the NQSConfig.INI file).

Granting the Analytics Log On as a Service Right (Windows)

This task is part of the "Installing the Siebel Analytics Server Clustering Feature."

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 operating system, grant the Log on as a service right explicitly to this account on each computer using one of the following methods.

NOTE: The Domain account for the clustered Siebel Analytics Server and cluster controllers must have the *Log on as a service* right explicitly granted on each computer running the servers and cluster controllers. However, the Siebel Analytics Web Server can be run under a different account or domain, as long as the Web Server login has the appropriate privileges.

Use one of the following procedures to perform the task of granting the Log on as a service right, based on your specific Windows platform.

Granting the Analytics Log On as a Service Right (Windows XP)

To grant the Log on as a service right under Windows XP

1. Choose Administrative Tools from the Control Panel and click Local Security Policy.
2. In the Local Security Settings window, 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 Log on as a service Properties window, and click Add User or Group.
4. In the Select Users or Groups window, in the field From this location, make sure the correct domain for the account is displayed.

   If it is not, click Locations and select the domain that the account is in. Locate the account in the Name list, highlight it, and click OK.
5. Type the name of the account in the field labeled Enter the object names to select.

   Click the Check Names button to verify that it is correct. Click OK.
6. Click OK again to return to the Local Security Settings window.

   The Log On as a service right has been added to the account. Close this window.

Granting the Analytics Log On as a Service Right (Windows NT)

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

1. Choose Start > Programs > Administrative Tools (Common) > User Manager.

   The User Manager window appears.

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, and then click Add.

The Add Users and Groups window appears.

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.

The User Rights Policy window shows the Log On as a service right, and the Grant To window shows the domain and account.

7 Click OK to return to the User Manager window and close the window.

Granting the Analytics Log On as a Service Right (Windows 2000)

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

1 Choose Administrative Tools from the Control Panel and click Local Security Policy.

The Local Security Settings window appears.

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.

The Select Users or Groups window appears.

4 From the Look In drop-down list, select the domain that the account is in.

5 Locate the account in the Name list, highlight it, and click Add.

Click OK.

6 Click OK to return to the Local Security Settings window.

The Log on as a service right has been added to the account. Close this window.

Installing the Server Clustering Feature

This task is part of the "Installing the Siebel Analytics Server Clustering Feature."

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

To install the clustering feature

1. Run the Siebel Analytics installer wizard according to the procedure in Chapter 4, "Installing Siebel Analytics Under Windows."

   In the wizard Setup Type window, select one of the following options, depending on the Siebel Analytics components you want to install on that particular computer:

   - Server
   - Complete
   - Custom

   For example, if a computer hosts 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.

2. Complete the installation.

3. Reboot the computer when prompted.

   NOTE: Using the default configuration created by the installation process, the Cluster Controllers fail to start. This failure to start is addressed in later steps in this procedure.

4. Copy any required repository files to the Repository subdirectory in the Siebel Analytics software installation directory on each computer.

   NOTE: 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 need to configure SQL Server DSN referenced by the repositories.

Process of Configuring Clustered Servers, Clients, and Controllers

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

This process includes the following tasks:

- "Configuring Clustered Servers and Cluster Controllers" on page 169
- "Modifying a Clustered ODBC (UNIX)" on page 171
- "Forcing Siebel Analytics Web to Use a Clustered ODBC" on page 171

When you use the 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 task is part of the "Process of Configuring Clustered Servers, Clients, and Controllers," and describes 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 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.

   The NQSConfig.INI file is located in the Config folder in the Siebel Analytics software installation folder. See Appendix A, "NQSConfig.INI File Reference."

   NOTE: You can make a copy of the NQSConfig.INI file, edit it, transfer it to the Config folders of the remaining computers, and then make computer-specific changes where necessary.

   a. Set the parameter "CLUSTER_PARTICIPANT" to Yes.

   b. Uncomment and supply valid values for the parameters "CLUSTER_PARTICIPANT" and "REPOSITORY_PUBLISHING_DIRECTORY".

   c. Make sure that nonclustering parameters, such as those set in the Cache and Repository sections of the NQSConfig.INI file, are substantially identical across all Siebel Analytics Servers in a cluster.

3 On each computer that is hosting a Siebel Analytics Server, 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 Using the wizard described in *Siebel Analytics Server Administration Guide*, configure Siebel Analytics Server data source names for clustering.

   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 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 Using a text editor, 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.

Modifying a Clustered ODBC (UNIX)

This task is part of the "Process of Configuring Clustered Servers, Clients, and Controllers." It describes how to modify the $INSTALLDIR/setup/odbc.ini file to include a new DSN.

The following text 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 a Clustered ODBC

This task is part of the "Process of Configuring Clustered Servers, Clients, and Controllers." In order to use Siebel Analytics Web with clustered Siebel Analytics Servers, you must use a different procedure for each operating system platform.

Forcing Clustering (UNIX)

The following procedure is to force clustering under UNIX platforms.

To use clustering under UNIX

1. Modify the $INSTALLDIR/Data/web/config/instanceconfig.xml file.
2. In the instanceconfig.xml file, use the data source name (DSN) that was created in "Modifying a Clustered ODBC (UNIX)" on page 171.

   NOTE: See also the topic on working in the Siebel Analytics Web configuration file in *Siebel Analytics Web Administration Guide*.
3. To use the new clustered DSN, restart Siebel Analytics Web and the Web server.

Forcing Clustering (Windows)

The following procedure is to force clustering under Windows platforms.

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.

Key Components of an Analytics Server Cluster

Figure 2 on page 173 shows a typical small cluster server setup. A small cluster consists of the following components:

- **Primary Cluster Controller.** The role of the primary cluster controller is to monitor the operation of the servers in the cluster and to assign sessions within the cluster.
- **Secondary Cluster Controller.** The secondary cluster controller assumes the role of the primary cluster controller if the primary controller is unavailable.
- **Master Server.** The master server is a clustered Analytics Server to which the Administration Tool connects for online repository changes.
- **Cluster Manager.** The Cluster Manager is available in the Administration Tool when a repository is open in online mode. Server nodes can be stopped, started and quiesced from the Cluster Manager.
- **Repository Publishing Directory.** This directory is shared by all Analytics Servers participating in a cluster. It holds the master copies of repositories edited in online mode. The Clustered Analytics Servers examine this directory upon startup for any repository changes. The directory typically resides on a shared file system visible to all servers in the cluster.

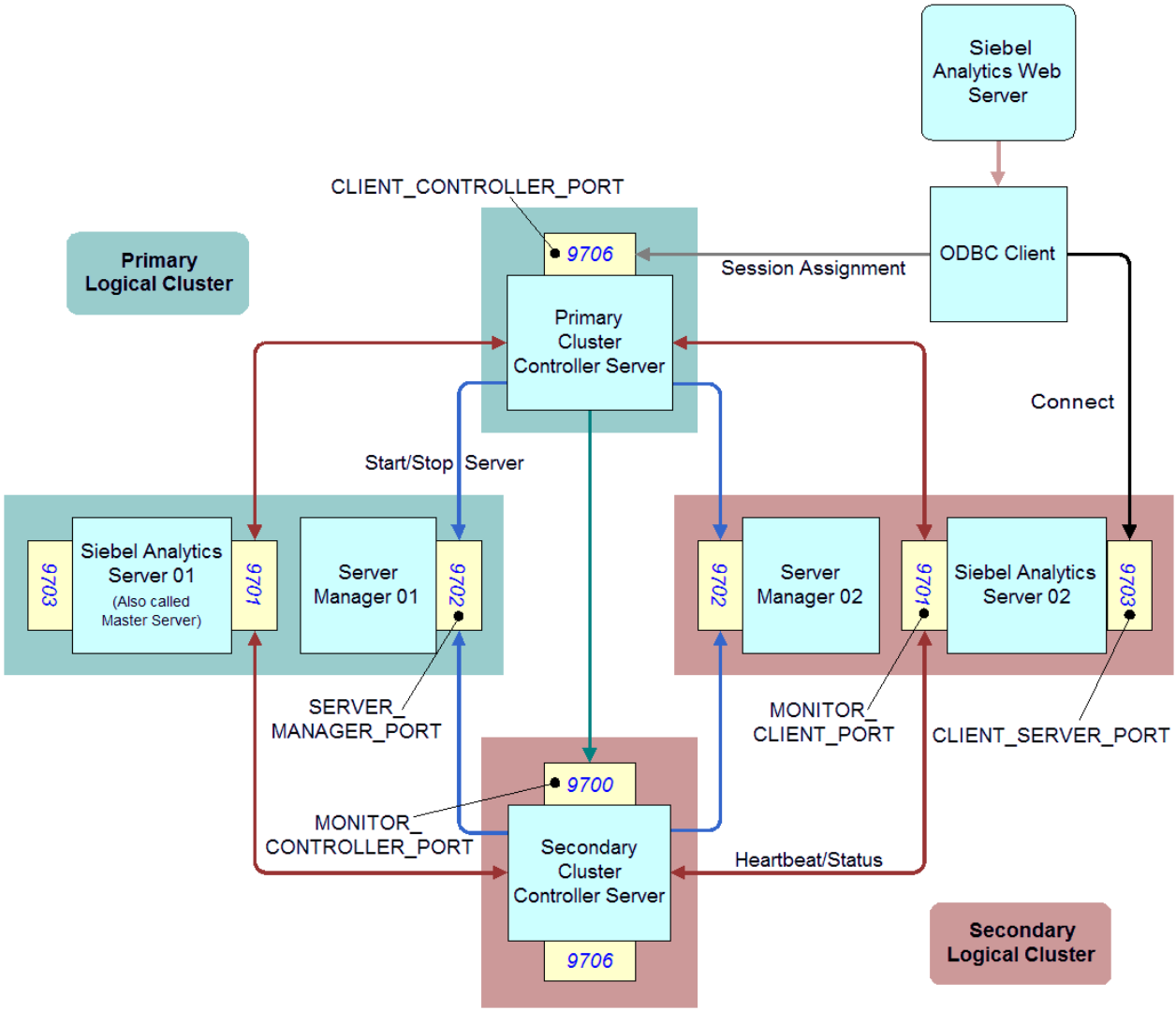

Figure 2. A Typical Cluster Controller Setup

Cluster Controller Functions

The cluster controller server performs the following functions:

- Services new ODBC requests.

  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 2 on page 173).
- The session assignment goes to the primary cluster controller's CLIENT_CONTROLLER_PORT (9706 in Figure 2 on page 173).

- Monitors the health of the Siebel Analytics Server nodes that participate in this cluster.
  - Each Siebel Analytics Server node loads the repository, so the server knows which database to get data from.
  - Siebel Analytics Server nodes use a heartbeat mechanism over TCP/IP.
  - The Siebel Analytics Server nodes include a Server Manager.
  - The Server Manager starts, stops, and restarts the Siebel Analytics Server for the cluster controller server.

12 Localizing Siebel Analytics Deployments

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.

This chapter contains the following tasks:

- "Changing Localization Variables in the Siebel Analytics Repository" on page 176
- "Changing Configuration File Settings for Japanese Localizations on AIX" on page 176
- "Configuring Unicode Support for Analytics Charts" on page 177
- "About Upgrading Siebel Analytics Seed Data for Non-English Locales" on page 179
- "Importing Locale Seed Data into the Siebel Transactional Database" on page 179
- "Changing the Default Currency in Analytics Applications" on page 181
- "Process of Maintaining Translation Tables for Analytics" on page 182
- "Background Topics for Localizing Siebel Analytics Deployments" on page 191

NOTE: For deployments under UNIX systems, see also the task "Setting SORT_ORDER_LOCALE (UNIX)" on page 122.

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, as described in the following procedure.

To configure localizations in the Siebel Analytics repository

1. Using the Server Administration Tool, open the .rpd file.
2. Go to Manage > Variables and edit the variables shown in the following table of localized Siebel Analytics repository values.

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.")

Changing Configuration File Settings for Japanese Localizations on AIX

For Japanese localizations on AIX platforms, the Siebel Analytics Server may not start. You may need to perform the following steps.

To change configuration settings for Japanese localization

1. Make sure that locale JA_JP.UTF-8 is installed. If it is not, install it.
2. Open the NQConfig.INI file and change the following.
   - LOCALE = "Japanese";
   - SORT_ORDER_LOCALE = "Japanese";

   NOTE: These settings are case-sensitive.
3. Save and close the NQConfig.INI file and try restarting the Siebel Analytics Server.

See also the topic "Localizing Sort Order Settings (UNIX)" on page 120.

Configuring Unicode Support for Analytics Charts

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 the following topics:

■ "Converting Chart Fonts for Analytics Web Charts" on page 177

■ "Adding Converted Fonts to Charting Image Server" on page 177

NOTE: This note applies if you are upgrading from Siebel Analytics 7.5 versions. The location, structure, and content of the chart image server directory have changed from Siebel Analytics version 7.5. The image server is now installed under the main installation directory. Also, the file key.txt is no longer required.

Converting Chart Fonts for 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" on page 177.

Adding Converted Fonts to Charting Image Server

This procedure adds a 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_Siebel7\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.
4. Stop and restart the Siebel Analytics Web Server and PopChart server in order to see the changes.

About Upgrading Siebel Analytics Seed Data for Non-English Locales

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 seed data is normally part of the Siebel operational application suite, you would have loaded part of this data when you installed the Siebel operational application. The additional process described in "Importing Locale Seed Data into the Siebel Transactional Database" on page 179 updates the seed data and makes it current for the Siebel Analytics applications. This process must be performed once for each language in which your data is to be viewed.

During the Siebel Analytics installation, a folder named $INSTALLDIR\SeedData was created. This folder contains a subfolder for each language. Within each language subfolder is a .dat file (the data to be imported) and an .inp file (the WHERE clause governing the import). For more information about these files, see "Importing Siebel Financial Services Metadata Files" on page 180.

Importing Locale Seed Data into the Siebel Transactional Database

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

If the primary language being used is not English, you may have to import additional locale seed data (depending on the number of languages you use) as shown in the following procedure.

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 on page 179 after replacing the connection parameters shown in the following table 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\<XX>\analytics_seed_<XXX>.dat /w y /q
100 /h Log /x f /i
$INSTALLDIR\SeedData\<XX>\metadata_upgrade_<XXX>_<DBPlatform>.inp /l
metadata_upgrade_<XXX>.log
```

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, configure database connectivity to the machine on which the Siebel Analytics Server resides.

Siebel Analytics Server uses the Siebel transactional 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.

Importing Siebel Financial Services Metadata 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 179.

The files used in the importing of Siebel operational application metadata and seed data are shown in Table 44 on page 180.

Table 44. Files for Importing Siebel Operational Application Metadata and Seed Data

File Name	Purpose of File
Metadata_upgrade_<*XXX*>_ora.inp Metadata_upgrade_<*XXX*>_mssql.inp Metadata_upgrade_<*XXX*>_db2.inp	Set of import files used to control the import of the analytics_seed_<*XXX*>.dat file to a particular database platform. *XXX* is the Siebel Systems three-letter code. For example: FRA, ITA, DEU.
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 transactional database. *XXX* is the Siebel Systems three-letter code. For example: FRA, ITA, DEU.

Changing the Default Currency in Analytics Applications

In Siebel Analytics applications, you may see a dollar sign used as the default symbol when amounts of money are displayed. In order to change this behavior, you must edit the currencies.xml file using the following procedure. The currencies.xml file is located in the following directories:

- Windows:

  ```
  $INSTALLDIR\SiebelAnalyticsData\Web\config\
  ```

- UNIX:

  ```
  $INSTALLDIR/ SiebelAnalytics/Data/web/config
  ```

To change the default currency in Siebel Analytics Applications

1. In a text editor, open the currencies.xml file.
2. Look for the currency tag for the warehouse default (tag="int:wrhs"):

   ```
   <Currency tag="int:wrhs" type="international" symbol="$" format="$#" digits="2"
   displayMessage="kmsgCurrencySiebelWarehouse">
      <negative tag="minus" format="-$#" />
   </Currency>
   ```

3. Replace the symbol, format, digits and negative information in the warehouse default with the information from the currency tag you want to use as the default.

   For example, if you want the Japanese Yen to be the default, replace the contents of the warehouse default currency tag with the values from the Japanese currency tag (tag="loc:ja-JP"):

   ```
   <Currency tag="loc:ja-JP" type="local" symbol="¥" locale="ja-JP" format="$#"
   digits="0">
      <negative tag="minus" format="-$#" />
   </Currency>
   ```

   When you are finished, the default warehouse currency tag for Japanese should look like the following example:

   ```
   <Currency tag="int:wrhs" type="international" symbol="¥" format="$#" digits="0"
   displayMessage="kmsgCurrencySiebelWarehouse">
      <negative tag="minus" format="-$#" />
   </Currency>
   ```

4. Save and close the currencies.xml file.

Process of Maintaining Translation Tables for 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*.

About Translating 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*.

The "Process of Maintaining Translation Tables for Analytics" includes the following tasks:

- "Externalizing Metadata Strings" on page 183
- "Checking the Execution Order of Initialization Blocks" on page 184
- "Using the Externalize Strings Utility for Localization" on page 184
- "Adding Custom Translations to S_MSG Table" on page 185
- "Editing Custom Labels in Siebel Analytics Dashboards" on page 189
- "Displaying Localized Column Field Names in Siebel Miner or Data Mining Workbench" on page 189

Externalizing Metadata Strings

This task is part of the "Process of Maintaining Translation Tables for Analytics."

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 shown in Table 45 on page 183.

Table 45. Example of S_MSG Translation Table

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, as described in the following procedure.

To externalize metadata strings in the Siebel Analytics repository

1. Stop the Siebel Analytics Server.
2. Open SiebelAnalytics.rpd using the Server Administration Tool in offline mode.
3. Select the entire Presentation layer and right-click the mouse to display the menu.
   a. From the pop-up menu, select Externalize Display Names. A check mark appears next to this option the next time you right-click on the Presentation layer.

      NOTE: When Externalize Display Names is checked, all metadata strings are read from an external Siebel transactional database, specifically from the S_MSG table.

   b. Unselect the Presentation layer.
4. In the Physical layer, select the Externalized Metadata Strings database icon.

   Expand the tree.
5. Double-click Internal System Connection Pool. The Connection Pool window opens.

   In the General tab, the field Data source name should point to the Siebel operational application database.
6. Click OK and exit the Server Administration Tool.
7. Restart the Siebel Analytics Server.

Checking the Execution Order of Initialization Blocks

This task is part of the "Process of Maintaining Translation Tables for Analytics."

This topic applies to an integrated Siebel Analytics environment in which display names are externalized. The language of the metadata in Answers (the Subject Area and column names) depends upon the initialization block LOCALE, which must be executed before the External Metadata Strings initialization block. The following procedure describes how to check the precedence of initialization block execution.

To check the execution order of initialization blocks in the Siebel Analytics repository

1. Stop the Siebel Analytics Server.
2. Open SiebelAnalytics.rpd using the Server Administration Tool in offline mode.
3. From the menu, navigate to Manage > Variables > Initialization Blocks and double-click Externalize Metadata Strings.
4. Click the Execution Precedence tab.

   Make sure that the LOCALE initialization block is shown as executing before Externalize Metadata Strings.
5. Click OK and close Variable Manager, and exit the Server Administration Tool.
6. Restart the Siebel Analytics Server.

Using the Externalize Strings Utility for Localization

This task is part of the "Process of Maintaining Translation Tables for Analytics."

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 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

The tasks in this section are part of the "Process of Maintaining Translation Tables for Analytics."

When you add custom objects to the metadata and choose to externalize these objects (by right-clicking 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: The custom Presentation layer objects show up only in the native language of the metadata (the language in which you added these new objects).

The tasks for adding custom translations to S_MSG table require the use of Siebel Tools. These tasks are as follows:

- "Adding Lists of Values for Siebel Analytics Metadata" on page 185
- "Adding String Translations for Siebel Analytics Metadata" on page 188

Adding Lists of Values for Siebel Analytics Metadata

The procedure in this topic is part of "Adding Custom Translations to S_MSG Table."

The S_MSG table can be populated with translated message strings. Before populating the S_MSG table, you must use Siebel Tools to add lists of values (LOV) for Siebel Analytics (this is a one-time task).

To add LOV values for Siebel Analytics metadata

1 Open Siebel Tools and connect to your Siebel operational 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 Depending on your deployment, add a Message Type record with the values shown in the following tables.

NOTE: The values are different for Financial Services and other Siebel operational applications.

Value Name	Enter
Type	MESSAGE_TYPE
Display Value	Metadata
Description	Analytics Metadata Strings
Language-Independent Code	Metadata
Active	Y [check mark]
Language Name	[Choose deployment language]

Value Name	Enter (Financial Services Only)
Type	MESSAGE_TYPE
Display Value	FINS_Metadata
Description	Analytics Financial Services Metadata Strings
Language-Independent Code	FINS_Metadata
Active	Y [check mark]
Language Name	[Choose deployment language]

All other fields should accept the default settings.

5 Depending on your deployment, add a Message Facility record with the values shown in the following tables.

NOTE: The values are different for Financial Services and other Siebel operational applications.

Value Name	Enter
Type	MESSAGE_FACILITY
Display Value	HMF
Description	Analytics Message Facility
Language-Independent Code	HMF
Active	Y [check mark]
Language Name	[Choose deployment language]

Value Name	Enter (Siebel Financial Services Applications Only)
Type	MESSAGE_FACILITY
Display Value	FIN
Description	Financial Services Message Facility
Language-Independent Code	FIN
Active	Y [check mark]
Language Name	[Choose deployment language]

All other fields should accept the default settings.

6 Add a Message Level record with the values shown in the following table.

Value Name	Enter
Type	MESSAGE_LEVEL
Display Value	AnalyticsNew
Description	Diagnostic Message for server side programs
Language-Independent Code	AnalyticsNew
Active	Y [check mark]
Language Name	[Choose deployment language]

Adding String Translations for Siebel Analytics Metadata

The procedure in this topic is part of "Adding Custom Translations to S_MSG Table."

The following procedure describes how to add string translations for Siebel Analytics metadata to the S_MSG table. This task occurs in Siebel Tools and in the Server Administration Tool.

To add string translations for Siebel Analytics metadata

1. Open Siebel Tools and connect to your database.
2. Navigate to Screens Menu > System Administration > Strings.

   Right-click and select New Record from the menu to add a new record.
3. Obtain the Message Key from the Server Administration Tool.
   a. In the Server Administration Tool, right-click on the new Presentation layer metadata object and select Properties from the menu.
   b. 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 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. Select the Message Type, depending on which one was added in Step 4 of the procedure in "Adding Lists of Values for Siebel Analytics Metadata" on page 185.

Application	Display Value	Description
Siebel Operational Applications	Metadata	Analytics Metadata Strings
Siebel Financial Services	FINS_Metadata	Analytics Financial Services Metadata Strings

6. Select the Message Level *AnalyticsNew*.
   a. In the Message Text column, add the translation of the object.
   b. Check the flags (set to Yes) for the Translate and Active columns.
   c. Set the Error Message # column to 0.
7. Select the Message Facility, depending on which one was added in Step 5 of the procedure in "Adding Lists of Values for Siebel Analytics Metadata" on page 185.

Application	Display Value	Description
Siebel Operational Applications	HMF	Analytics Message Facility
Siebel Financial Services	FIN	Financial Services Message Facility

8 Repeat Step 3 through Step 7 on page 188 for each new metadata object string.

9 Exit Siebel Tools, the Server Administration Tool, and restart the Siebel Analytics Server.

Editing Custom Labels in Siebel Analytics Dashboards

This task is part of the "Process of Maintaining Translation Tables for Analytics."

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.

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

To edit the custom labels

1 Log into 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.

Displaying Localized Column Field Names in Siebel Miner or Data Mining Workbench

This task is part of the "Process of Maintaining Translation Tables for Analytics." It applies only if you are licensed for Siebel Miner or Data Mining Workbench and are deploying Siebel Analytics in a localized environment.

The column field names in Siebel Miner or Data Mining Workbench remain displayed in English unless you change the locale in the Siebel Analytics repository, as shown in the following procedure.

To display column field names in the localized language

1 Stop the Siebel Analytics Server.

2 Using the Server Administration Tool, open the Siebel Analytics repository.

3 In the menu, click on Manage > Variables.

4 Double-click Sessions > LOCALE.

5 Change the value in the Default intializer field from 'en' to the code for the localized language (for example, 'ja' for Japanese). (Include the single quotes.)

For a list of language codes, see Table 73 on page 295.

6 Click OK and close the Variable Manager window.

Save the repository.

7 Restart Siebel Analytics Server.

Background Topics for Localizing Siebel Analytics Deployments

The following topics give more information on the procedures in this chapter:

- "About Installing Siebel Analytics Localization Packs" on page 191
- "The WEBLANGUAGE Session Variable" on page 191

About Installing Siebel Analytics Localization Packs

During your Siebel operational application installation, you also should have installed a Siebel operational application 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, see the server installation guide for the operating system you are using.

The WEBLANGUAGE Session Variable

The session variable WEBLANGUAGE is passed from Siebel Analytics Web to the Siebel Analytics server. In an integrated Siebel Analytics application environment, the value of the WEBLANGUAGE variable is what determines the value of the LOCALE variable for externalized display names.

WEBLANGUAGE is set to the language of the user's browser when a user first logs on to an integrated Siebel Analytics application. For example, if a user with a browser language set to French logs on to Answers for the first time, the value for WEBLANGUAGE is French, and the metadata is translated to French.

In Stand-alone Siebel Analytics, WEBLANGUAGE is set by the user choosing a language on the logon window. After the first logon, WEBLANGUAGE is reset or changed in the My Account page of Siebel Analytics Web.

13 Configuring the Siebel Analytics Application Repository

The following topics describe how to configure the Siebel Analytics repository to run a Siebel Analytics application in your environment. These topics are not applicable to Stand-Alone Siebel Analytics.

The configuration of Siebel Analytics applications repositories is the first part of a larger process of configuring Siebel Analytics applications to run with Siebel operational applications. For the second part of this process of integration, see Chapter 14, "Integrating Analytics Dashboards and Operational Applications Data."

This following tasks are performed using the Server Administration Tool.

NOTE: Prior to performing these steps, you should read *Siebel Analytics Server Administration Guide* as well as this book.

- "Process of Configuring an Analytics Repository" on page 193
- "Stopping and Starting Services When Importing a Repository (Windows Only)" on page 194
- "Changing the Default Analytics DSNs" on page 195
- "Changing the Analytics Database Type" on page 196
- "Creating a Dedicated Analytics Repository" on page 197

Process of Configuring an Analytics Repository

The general process of configuring Siebel Analytics applications repositories is as follows:

- Stop the Siebel Analytics services.

  See "Stopping and Starting Services When Importing a Repository (Windows Only)" on page 194.

- Using the Server Administration Tool, configure the Siebel Analytics repository (SiebelAnalytics.rpd) in the Physical layer.
  - Change the default data source names (DSN) and DSN user name to conform with your DSNs and DSN user name. See Changing the Default Analytics DSNs on page 195.
  - Change the database connection type for the data sources relevant to your Analytics operational applications. See Changing the Analytics Database Type on page 196.
  - Change the tableowner to match the owner of your database environment for:
    - Siebel transactional database (OLTP database)
    - Siebel Data Warehouse

    See "Changing Database Connection Pool Settings" on page 54.

■ Restart the Siebel Analytics services.

See "Restarting the Analytics Servers" on page 149.

Stopping and Starting Services When Importing a Repository (Windows Only)

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 after importing or copying a repository

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

To start the services after importing or copying a repository

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

Changing the Default Analytics DSNs

The database DSNs and user names have been configured to use the specific static repository variables shown in Table 46 on page 195. The default values should be changed to conform with the database DSNs in your environments.

Table 46. 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 Server 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 operational application database tableowner name and the Siebel Data Warehouse tableowner name. Update the tableowners so that the various initialization blocks work properly.

Changing the Analytics Database Type

If you are using other database types than the default shipped with Siebel Analytics, follow these steps to change the database type.

To change the database type

1. On a Windows computer, open the Server Administration Tool in offline mode.

   NOTE: For information on how to use the Server Administration Tool, see *Siebel Analytics Server Administration Guide*.

   By default, the user name 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 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 is 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, see *Siebel Analytics Server Administration Guide*.

5. Repeat Step 2 through Step 4 on page 196 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 logon, in order to prevent logon failures (for example, Pharma Initialization Blocks do not fail for Siebel operational applications).

6. Save the repository.

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

Creating a Dedicated 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 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 makes your repository administration easier and also improve the server startup time. Trimming the repository improves performance.

NOTE: Make all changes to the repository in Offline mode.

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 nonadjacent objects.

   Depending on the category of object you selected, different buttons allow you to specify how you want objects added:

   - When you select 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, is updated or synchronized.
   - When you select the Groups category, you can select one of the following:
     - 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 select the Variables category, the defined system and session variables are displayed in the left pane. You can select one of the following:
  - 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 are to 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.

8. For the changes to take effect, save the repository and restart the server.

   See "Restarting the Analytics Servers" on page 149.

About Merging Repositories for Upgrades

This note is for 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). During upgrades, you need to merge your customized content into the repository and Web Catalog that are distributed with this version of the Siebel Analytics platform.

- For information about merging content into the Siebel Analytics repository, see the topic on the Merge utility in *Siebel Analytics Server Administration Guide*.
- For information about merging content into the Siebel Analytics Web Catalog, see the topic on Analytics Catalog Manager in *Siebel Analytics Web Administration Guide*.

Background Topics for Configuring the Siebel Analytics Repository

The following topics give additional information on the procedures in this chapter:

- "Preconfigured Analytics Database Connections" on page 199
- "Analytics Initialization Blocks" on page 199

Preconfigured Analytics Database Connections

The SiebelAnalytics.rpd application repository contains preconfigured database connections. By default the database type is IBM DB2 UDB. You must 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 database connections is presented in "Changing Database Connection Pool Settings" on page 54.

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 47 on page 200 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 47. 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 operational 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 OLTP_LANG_ID by querying the Siebel operational application database.
Orgs for Org-based Security	Queries the Siebel operational application database to get the organization membership for each user. It sets the variable ORGANIZATION.
Primary Owner ID	Sets the primary owner ID based on the user login ID.
Primary Position ID	Queries the Siebel operational application database to set the variable PRIMARY_POSTN_ID.
Warehouse Refresh Date	Sets several time-based variables such as CURRENT_YEAR.
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 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*.

14 Integrating Analytics Dashboards and Operational Applications Data

The following topics describe the additional configuration steps required for you to run a Siebel Analytics application with a Siebel operational application. These topics are not applicable to Stand-Alone Siebel Analytics.

After installation, you must configure the Siebel Analytics repository (see Chapter 13, "Configuring the Siebel Analytics Application Repository") and initialize the Siebel operational application in order to view the Analytics dashboards. You may also need to customize the application home page.

NOTE: Prior to performing these steps, you should read *Siebel Analytics Server Administration Guide* as well as this book.

The integration of a Siebel Analytics application with a Siebel operational application involves three major processes:

- Process of Upgrading Seed Data on page 202
- Completing the Initialization in the Siebel Operational Application on page 205
- Upgrading your customizations to the Siebel Analytics or operational application

  See "Reapplying Customized Style Sheets" on page 207.

If you are running Siebel Analytics under UNIX, you might have to perform these additional configuration tasks:

- "Configuring ODBC Data Source for Analytics (UNIX)" on page 116
- "Configuring Teradata Data Source for Analytics (UNIX)" on page 116
- "Upgrading Older Analytics Repositories (UNIX)" on page 204

Process of Upgrading Seed Data

The seed data mentioned in this topic refers only to the data used to integrate Siebel Analytics dashboards into a Siebel operational application. Seed data also includes data required to support localization of the Siebel Analytics metadata.

You may need to upgrade Siebel seed data for the following reasons:

- If you are upgrading seed data in a language that is not the primary installation language, see "Importing Locale Seed Data into the Siebel Transactional Database" on page 179.
- If you are upgrading seed data for a Siebel Industry Application, see "Importing Siebel Industry Applications Seed Data" on page 202.
- If you are upgrading seed data from an earlier version of Siebel Analytics, see "Updating Older Analytics Seed Data" on page 203.

NOTE: This book does not include any changes to the Siebel repository or seed data updates that may be required for the data warehouse upgrade. For repository and data warehouse data upgrades, refer to *Siebel Data Warehouse Installation and Administration Guide*.

Importing Siebel Industry Applications Seed Data

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

To import Siebel Analytics seed data into a Siebel transactional database

1. Obtain the required language .inp and .dat files from the Siebel Analytics language folder `$INSTALLDIR\SeedData\ 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
   analytics_seed_<XXX>.dat /i metadata_upgrade_<XXX>_<DBPlatform>.inp /w y
   ```

   Replace the *XXX* with the Siebel Systems three-letter code (FRA, ITA) and the *DBPlatform* with the abbreviation for the database platform being used. For example:

   ```
   dataimp /u sadmin /p sadmin /c JPN_CRMDEV1 /d siebel /f analytics_seed_JPN.dat /i
   metadata_upgrade_JPN_db2.inp /w y
   ```

Updating Older Analytics Seed Data

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

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

NOTE: The seed data update should be done by 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 the following table of variables for updating seeds.

```
$SiebelRoot\bin\odbcsql /s "$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 (/).

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

Upgrading Older Analytics Repositories (UNIX)

If you have an older version of the Siebel Analytics Server running under UNIX (for example, version 7.0.4), 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 transferable between UNIX and Windows. You can see this in the SiebelAnaltyics.rpd on HP-UX. When you navigate to Manage > Variables > LAST_REFRESH_DT in the Server Administration Tool running on a Windows machine, the LAST_REFRESH_DT 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.

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

4. FTP the repository back to the UNIX machine.

Completing the Initialization in the Siebel Operational Application

Once you have configured your Siebel Analytics Server and are able to access the dashboards, you need to update the Siebel operational application to view Analytics dashboards from within the Siebel operational application. Completing the initialization in the Siebel operational application involves the following processes:

- Change the operational application host name to the host name of the machine that runs Siebel Analytics Web. See the following:
  - "Updating the Siebel Operational Application" on page 206
  - "Reapplying Customized Style Sheets" on page 207
  - "Creating a Virtual IP Address for the SWE and Siebel Analytics Web" on page 208
  - "Testing the Virtual IP Configuration for Siebel Analytics and the SWE" on page 209
  - "Testing Siebel Analytics Action Links" on page 211
- Customize the operational application home page, dashboards, or content, or add views to a dashboard. See the following:
  - "Process of Customizing Analytics Application Home Page and Dashboards" on page 215
  - "Customizing Analytics Content on the Siebel Operational Application Home Page" on page 215
  - "Adding Views for Custom Analytics Dashboards" on page 217
  - "Verifying NQHOST Setup for Pharma Field Analytics Client" on page 219
  - "Integrating the Pharma Application Home Page with the Pharma Field Analytics Client" on page 221
  - "Importing Pharma Application Target Lists to the Pharma Field Analytics Client" on page 222

Updating the Siebel Operational Application

The following task changes the Siebel operational application host name to the host name of the machine that runs Siebel Analytics Web.

To update the Siebel operational application

1. Open your Siebel operational application and login 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.

     For example, *servername*.siebel.com:8080

   NOTE: The following additional information is applicable only to UNIX platforms.

   You may need to add the domain name suffix to the server name in order to make sure that action links work on the Siebel Analytics user interface.
6. Log out of the application and log back in.

Reapplying Customized Style Sheets

In Siebel Analytics 7.7, new styles have been appended to the following style sheets:

- Go.css
- PortalBanner.css
- PortalContent.css
- Views.css

These new classes are identified in the style sheets. In this version of Siebel Analytics, new styles and files must be added to the underlying style sheet (for example, to s_Siebel7). For complete functionality, any custom styles will require similar updating. In addition, views2.css and some other files have been have been added to the s_ directory. For custom column formatting to work properly, references to font sizes and families should also be removed from the td styles in PortalBanner.css, PortalContent.css, Views.css.

Because of these changes to styles in Siebel Analytics 7.7, review your deployment's customizations manually, reapply them, and test them thoroughly to ensure that there are no problems.

After you have tested them, but before you copy the default views.css files back to the implementation server, perform the following task on the server to clear the server caches.

To clear the server caches and restore your default views

1. Shut down Siebel Analytics Server, Siebel Analytics Web and IIS.
2. Remove your custom views.css from the directory where it has been installed.

   For example:

   ```
   $INSTALL\Web\App\Res\s_Siebel7\b_mozilla_4
   ```

   or

   ```
   $INSTALL\SiebelAnalyticsData\Web.
   ```

3. Clear Siebel Analytics Web Server Cache.

   In the C:\WINNT\Temp directory, delete the nQs_*.temp files.

4. Clear the Browser Cache.

   From the Internet Explorer menu, navigate to Tools > Internet Options > Settings > View Files, and delete all the files in these folder.

5. Restore the default views.css files to the appropriate folder.
6. Restart the Siebel Analytics Server, Siebel Analytics Web and IIS.

Process of Configuring Siebel Analytics with Siebel Web Extension (SWE)

Whenever you run Siebel Analytics and Siebel Web Extension (SWE) on separate machines, you must perform additional configuration steps in order for action links and interactive charts to work. If, for example, you plan to run the SWE and Siebel Analytics Web on different Web servers, you must use some kind of networking or load balancing mechanism to create a single logical domain (or virtual IP address) for the two machines.

CAUTION: When Analytics Web Server and Siebel Web Server are installed on different machines and load balancing software is used to create a single virtual IP address, the action links feature works only if you log onto the Siebel application using a virtual Web browser. Action links fail on a dedicated client if the SWE and Siebel Analytics Web servers are on separate machines. Either use a virtual Web browser, or install the Analytics Web Server and Siebel Web Server on the same machine.

By creating one virtual IP address for two machines, the Web browser accesses one IP address, while still being routed to different physical machines, based on the port accessed. To the browser, it appears that both servers are running on the same IP address.

You can use any of several physical methods to create a single logical domain, such as running SWE and Siebel Analytics Web on a single machine if you are not load balancing the SWE, or using a router to do the mapping, or using load balancing software. Your company must determine the best mechanism to accomplish this routing given the topology being used.

Configuring Siebel Analytics to work with Siebel Web Extension includes the following tasks:

- "Creating a Virtual IP Address for the SWE and Siebel Analytics Web" on page 208
- "Testing the Virtual IP Configuration for Siebel Analytics and the SWE" on page 209

Creating a Virtual IP Address for the SWE and Siebel Analytics Web

This task is part of "Process of Configuring Siebel Analytics with Siebel Web Extension (SWE)."

You create a virtual IP address for the Siebel Web Engine (SWE) and Siebel Analytics Web in order to make it appear that all servers are running on the same virtual machine. The easiest way to do this is to configure Siebel Analytics Web to run on a different port (for example, port 84) from SWE (which usually runs on port 80).

For example, SWE is load-balanced across <*machine1*>:port 80 and <*machine2*>: port 80, and Siebel Analytics Web is running on <*machine3*>:port 84, and the virtual address is defined as http://siebel.company.com. Therefore, the network or load-balancing software should be configured to route requests like http://siebel.company.com to <*machine1*> and <*machine2*>, and to route requests like http://siebel.company.com:84 to <*machine3*>.

To create a virtual IP address for Siebel Web Engine and Siebel Analytics Web

1. On the network, set up CSS to direct requests from <*virtual domain*> to <*physical Siebel Web Server Extension machine*>
   - Where the acronym CSS represents the load-balancer or router used to do the virtual IP configuration.
   - Where <*virtual domain*> is the virtual IP prefix that users enter to navigate to the Siebel applications (in the preceding example, this is http://siebel.company.com).
2. On the network, set up CSS to direct requests from <*virtual domain*>:84 to <*physical Analytics Web machine*>:84.
3. In the Siebel application, using the Siebel Administration screen, set the NQHost parameters for Siebel Analytics Symbolic URLs to point to the <*virtual domain*>:84, instead of directly to the Siebel Analytics Web server physical machine.

   NOTE: If you are running Siebel Analytics 7.5.3 instead of 7.7 or later, perform the following additional step.
4. In the Siebel application, add the following registry setting on the Siebel Analytics Web machine:

   ```
   .../Web/7.5/Charts/ForceFileBasedPainter = true
   ```

Testing the Virtual IP Configuration for Siebel Analytics and the SWE

This task is part of "Process of Configuring Siebel Analytics with Siebel Web Extension (SWE)."

Use a client browser to verify that Siebel Analytics and SWE work when accessed directly through a physical machine address, using the following procedure. For <*virtualdomain*>, substitute the Virtual IP address you created in "Creating a Virtual IP Address for the SWE and Siebel Analytics Web" on page 208.

To test the Virtual IP configuration with Siebel Analytics and SWE

1. In a client browser, type <*virtual domain*>:84/analytics. The Siebel Analytics logon appears.
2. In a client browser, type <*virtual domain*>/callcenter (or other Siebel application). The SWE appears.
3. Navigate to an Analytics screen within the Siebel application to see if Siebel Analytics appears.
4. Interact with Siebel Analytics charts and action links.

Configuring Analytics Action Links

Siebel Analytics applications contain prebuilt action links in reports and dashboards. Action links are a way to navigate from a user's analytics 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. For how to create Siebel Intelligence Dashboards action links, see *Siebel Analytics Web Administration Guide*.

Depending on your deployment, you may need to perform additional configuration of your Siebel Analytics application in order for the action links feature to work properly. The following tasks are relevant to the configuration of your application for action links:

- "Configuring Action Links Containing Single Quotation Marks" on page 210
- "Testing Siebel Analytics Action Links" on page 211

Configuring Action Links Containing Single Quotation Marks

This task is part of "Configuring Analytics Action Links."

Action links refer to views with simple names, such as All Account List View, which are easily referenced in the parameters for the NQSWENav command 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 in their names. Simply pasting the view name with the quotation mark results 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>
```

To prevent this problem, use the escape character (or backslash) to reference the single quotation mark in JavaScript. For any single quotation mark, insert two back slashes before the quote, and the Siebel Web Engine is able to process the request correctly. For example:

```
<a href=\"javascript:NQSWENav('Manager\\'s Account List View','Account List
Applet','"@"');\">"@" </a>
```

Testing Siebel Analytics Action Links

This task is part of "Configuring Analytics Action Links."

Use the following procedure to make sure that action links you create work correctly.

To test a Siebel Analytics action link

1. Log on using your system logons. 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.

Integrating Analytics and Siebel Operational Applications

The following tasks are described for the process of integrating your Siebel Analytics application with your Siebel operational application:

- "Accessing Optional Analytics Applications" on page 212
- "Configuring the Browser Settings for Operational Applications" on page 214
- "Process of Customizing Analytics Application Home Page and Dashboards" on page 215

Accessing Optional Analytics Applications

This task is part of "Integrating Analytics and Siebel Operational Applications."

Depending on the options you purchased with your Siebel operational application, you must perform additional steps in order to access the corresponding Siebel Analytics options. Table 48 on page 212 shows the additional options for Siebel Analytics.

Table 48. Siebel 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 the following procedure to access the Incentive Compensation Analytics.

To turn on options for Incentive Compensation Analytics

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 shown in the following list.

Web Group Option
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.

Configuring the Browser Settings for Operational Applications

NOTE: This topic applies only to Siebel Analytics version 7.7.1 and Siebel operational applications version 7.7.

This task is part of "Integrating Analytics and Siebel Operational Applications."

If the Siebel Server and the Siebel Analytics Server URLs are from different domains, you may need to change the browser settings for your Siebel Analytics application. Perform the following procedure.

NOTE: You do not need to change browser settings if the Siebel Server and the Siebel Analytics Server URLs are from the same domain.

To change browser settings for Siebel Analytics operational applications

1. In your browser, navigate to Tools > Internet options > Security tab.
2. Select Internet zone and click Custom Level.
3. In the Miscellaneous > Access data sources across domains setting, select the Enable radio button and click OK.
4. Select Local Intranet zone and click Custom Level.
5. In the Miscellaneous > Access data sources across domains setting, select the Enable radio button and click OK.
6. Click OK to exit browser Tools.

Process of Customizing Analytics Application Home Page and Dashboards

The process of customizing your Siebel Analytics application's home page and dashboards may include the following tasks:

- "Customizing Analytics Content on the Siebel Operational Application Home Page" on page 215
- "Adding Views for Custom Analytics Dashboards" on page 217
- "Verifying NQHOST Setup for Pharma Field Analytics Client" on page 219
- "Integrating the Pharma Application Home Page with the Pharma Field Analytics Client" on page 221
- "Importing Pharma Application Target Lists to the Pharma Field Analytics Client" on page 222

Customizing Analytics Content on the Siebel Operational Application Home Page

This task is part of the Process of Customizing Analytics Application Home Page and Dashboards.

Siebel Analytics applications are integrated with Siebel operational applications using the symbolic URL infrastructure. The following task describes 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. The symbolic URL specifies how the HTTP request to the external application should be constructed and to defines any arguments and values to be sent as part of the request.

NOTE: For more information on the symbolic URL infrastructure, see *Siebel Portal Framework Guide*. This topic 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 home page to the Analytics report. If you have not already done so, you need to create a new home page and set it up to use a symbolic URL.

NOTE: For Siebel Pharma Field Analytics settings, see "Verifying NQHOST Setup for Pharma Field Analytics Client" on page 219.

To configure a new Home Page 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.
For example:

```
http://NQHOST/Analytics/saw.dll
```

For the Host Name, choose the Analytics Server Name from the drop-down list. The following table shows the other parameters for reports.

Parameter	Value
NQHOST	A virtual name in the URL that points to the Analytics Web machine
Fixup Name	Inside Applet
SSO Disposition	Inline
Analytics Web application name	Select from the drop-down list

5 Create the appropriate symbolic URL Arguments.

These arguments depend upon the particular Analytics report that you are trying to display. The Argument Values should be the same for any Analytics report you work with, except for the Path Argument Value. Use the procedure in "Determining the Path Argument" on page 216 to determine the path to the Analytics report.

Determining the Path Argument

The Path argument tells the symbolic URL the path to the report on the Analytics Web. (For example, `/shared/Sales/Pipeline/Overview/Top 10 Deals`.) Use the following procedure to determine the path to the Analytics report.

To determine the path to the report

1 Log on to your Analytics Web as an Administrator.

2 In the Siebel operational application, navigate to Answers > Siebel Analytics Web Administration.

3 Select Manage Analytics Catalog, and then navigate to your report.

4 Add this path name to the Symbolic URL argument.

The following table shows the symbolic URL path arguments for reports.

Name	Type	Path Argument Value	Append	Sequence #
Cmd	Constant	Go	Y	1
Path	Constant	/shared/Sales/Pipeline/ Overview/Top 10 Deals	Y	2
Syndicate	Constant	Siebel	Y	3

Name	Type	Path Argument Value	Append	Sequence #
nQUser	Command	UseSiebelLoginId	Y	4
nQPassword	Command	UseSiebelLoginPassword	Y	5
PostRequest	Command	PostRequest	Y	6

Adding Views for Custom Analytics Dashboards

This task is part of the Process of Customizing Analytics Application Home Page and Dashboards, and is similar to that of adding Siebel Analytics reports to the home page:

- Using Siebel Tools, set up a new view.
- In the Siebel operational application, define a symbolic URL for that view.

  For more information on how to set up a view to use Symbolic URLs, see *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 list, select the Symbolic URL you want to configure.

c In the Symbolic URL Arguments list, enter the arguments that need to be sent to the external host.

The following table shows the symbolic URL argument definitions for dashboards.

Parameter	Value
Fixup Name	Default
SSO Disposition	IFrame
Analytics Web application name	Select from the drop-down list.

The following table shows the symbolic URL path arguments for dashboards.

Name	Type	Value	Append	Sequence #
Cmd	Constant	PortalPages	Y	1
PortalPath	Constant	/shared/Executive/_Portal/Executive	Y	2
nQUser	Command	UseSiebelLoginId	Y	3
nQPassword	Command	UseSiebelLoginPassword	Y	4
PostRequest	Command	PostRequest	Y	5

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.

Verifying NQHOST Setup for Pharma Field Analytics Client

This task is part of the Process of Customizing Analytics Application Home Page and Dashboards.

When you run Siebel Pharma Field Analytics Client, your client application runs against a local instance of the database on your machine. You need to confirm that NQHOST is using the correct port number and DLL files to work with the Pharma Field Analytics Client.

To verify the NQHOST setup

1. Run the Disconnected Client application against your local database.
2. Log in as Administrator.

   You must have access to the following Integration Administration Screen views:

   - WI Host Admin View
   - WI Symbolic URL Admin View
3. Navigate to Administration – Integration.
4. Click WI Symbolic URL List, and search for NQHOST in Virtual Name field.

   The Host Name value should be localhost:9762.
5. Select the Host Administration View from the drop-down list and choose Symbolic URL Administration.

6 The following table shows Disconnected Clent symbolic URLs to search for.

For each of the URLs, the URL field is:

```
http://NQHOST/Analytics/sawd.dll
```

Symbolic URL Name
ePharmaHomePageAnalytics1
ePharmaHomePageAnalytics2
ePharmaHomePageAnalytics3
ePharmaHomePageAnalytics4
SISMLSDistrictManagerDashboard1
SISMLSSalesRepDashboard1
SiebelAnswers
SiebelDelivers

The following table shows the symbolic URL path arguments for SiebelAnswers and SiebelDelivers.

Name	Type	Path Argument Value	Append	Sequence #
Cmd	Constant	Answers for SiebelAnswers	Y	1
		Delivers for SiebelDelivers		
nQUser	Command	UseSiebelLoginId	Y	2
nQPassword	Command	UseSiebelLoginPassword	Y	3

Integrating the Pharma Application Home Page with the Pharma Field Analytics Client

If have licensed both the Siebel Pharma operational application and Siebel Pharma Field Analytics Client, you must change part of the operational application configuration file in order to access Analytics reports on the LS Analytics Home Page and to allow Create Target List integration.

This task is part of the Process of Customizing Analytics Application Home Page and Dashboards.

To allow integration of Pharma Analytics Home Page with Pharma Field Analytics

1. On the machine where you have installed the Siebel operational application, navigate to `$INSTALLDIR\sea77\siebsrvr\BIN\ENU\epharma.cfg`.
2. Using a text editor, open the file epharma.cfg.
3. In the Local section, find the parameter UseCachedExternalContent.
4. The default value for this parameter is TRUE.

   NOTE: If this parameter remains set to TRUE, Analytics reports on the Home Page return an error.
5. Set the UseCachedExternalContent parameter to FALSE.

   Save and close the file.

Importing Pharma Application Target Lists to the Pharma Field Analytics Client

If have licensed both the Siebel Pharma operational application and Siebel Pharma Field Analytics Client, you must change part of the operational application configuration file in order to allow you to import the contacts from the Pharma Analytics Create Target List function into the Field Analytics Client.

This task is part of the Process of Customizing Analytics Application Home Page and Dashboards.

To allow importation of Target List contacts into Siebel Pharma Field Analytics Client

1. On the machine where you have installed the Siebel operational application, navigate to $INSTALLDIR\sea77\siebsrvr\BIN\ENU\epharma.cfg.
2. Using a text editor, open the file epharma.cfg.
3. In the Siebel Client section, find the parameter EnableFQDN.
4. The default value for this parameter is TRUE.

   NOTE: If this parameter remains set to TRUE, the Create Target List functionality is disabled in the Pharma Field Analytics Client.
5. Set the EnableFQDN parameter to FALSE.

   Save and close the file.

15 Configuring Authentication in Analytics and Operational Applications

Two different levels of security configuration and authentication are supported by Siebel Analytics:

- Object-level security
- Data-level security

Data-level and object-level security groups for areas within the Siebel operational applications and Siebel Industry Applications are covered in the following topics. For more on user authentication in Siebel Analytics, see Chapter 10, "Configuring User Authentication and Security in Siebel Analytics."

The topics covered in this chapter include:

- "Object-Level Security in Analytics" on page 224
- "Data-Level Security in Analytics" on page 224
- "Integrated Security for Responsibilities and Groups in Analytics Applications" on page 225
- "Responsibilities and Access in Analytics Applications" on page 226
- "Metadata Object Level Security (Repository Groups) in Analytics" on page 230
- "Metadata Object Level Security (Web Catalog Groups) in Analytics" on page 230
- "Web Catalog Security in Analytics Applications" on page 231
- "Data-Level Security in Analytics Applications" on page 232
- "Implementing Data-Level Security in the Analytics Repository" on page 234
- "Position and Organization Initialization Variables in Analytics Applications" on page 237
- "Siebel Operational Applications Security" on page 238
- "Siebel Industry Applications Security Settings" on page 250

NOTE: For the purpose of this chapter, Responsibility is interchangeable with Repository group and Web Catalog group; they have a one-to-one correspondence.

Object-Level Security in 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 Analytics" on page 230.

- Web Catalog objects (Web client) security:

  Controls access to dashboards, pages, folders and reports. See "Metadata Object Level Security (Web Catalog Groups) in Analytics" on page 230.

Data-Level Security in 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 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 is automatically be reflected in the repository as well as the Web Catalog. The user inherits the appropriate permissions from the responsibilities.

NOTE: Users are always created in the Siebel operational application database, never in the Siebel Analytics repository.

This topic is described in the following subtopics:

- "Responsibilities and Access in Analytics Applications" on page 226
- "Metadata Object Level Security (Repository Groups) in Analytics" on page 230
- "Metadata Object Level Security (Web Catalog Groups) in Analytics" on page 230
- "Web Catalog Security in Analytics Applications" on page 231
- "Data-Level Security in Analytics Applications" on page 232
- "Implementing Data-Level Security in the Analytics Repository" on page 234
- "Position and Organization Initialization Variables in Analytics Applications" on page 237
- "Default Security Settings in Analytics Applications" on page 237

Responsibilities and Access in Analytics Applications

Permission and access are always determined by user's memberships in various responsibilities. In this case, Responsibility is interchangeable with Repository group and Web Catalog group; they have a one-to-one correspondence.

Siebel Analytics come with certain preconfigured responsibilities. Table 49 on page 226 shows these preconfigured responsibilities. Some of the responsibilities are described in further detail in Chapter 16, "Configuring Metadata for Analytics Applications."

Table 49. 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

Table 49. Siebel Analytics Applications Preconfigured Responsibilities

Application	Responsibility
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
	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
Consumer Goods	CS Analytics VP Sales
	CS Analytics Key Account Manager
	CG Sales Analytics User
	CG Sales Analytics Administrator

Table 49. Siebel Analytics Applications Preconfigured Responsibilities

Application	Responsibility
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
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

Table 49. Siebel Analytics Applications Preconfigured Responsibilities

Application	Responsibility
Usage Accelerator	Usage Accelerator Administrator
	Usage Accelerator Sales Executive
	Usage Accelerator Sales Manager
	Usage Accelerator Sales Rep
	Usage Accelerator FINS Administrator
	Usage Accelerator FINS Sales Executive
	Usage Accelerator FINS Sales Manager
	Usage Accelerator FINS Sales Rep
	Usage Accelerator Tracking (transactional database) **NOTE:** The Usage Accelerator Tracking responsibility is not visible in Siebel Analytics. The Administrator must associate, in the transactional database, this responsibility with each user to be tracked.

Checking Analytics Applications User Responsibilities

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.

Registering a New Analytics Applications User Responsibility

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.
- After the metadata is reloaded, the user must log out from the Siebel operational application, then log in again.

Metadata Object Level Security (Repository Groups) in Analytics

Metadata object security is configured in the Analytics repository (SiebelAnalytics.rpd) using the Server 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 50 on page 230.

Table 50. 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 Channel applications groups
Partner Managers	All Partner application groups

Metadata Object Level Security (Web Catalog Groups) in 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 on 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 Analytics Applications

Security in the Web Catalog has been preconfigured for the groups listed in Table 50 on page 230 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 receive 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 are not 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 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. 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 51 on page 232.

Other data security models such as custom models can be configured in the metadata using similar techniques. This security configuration requires an understanding of the business model setup and filtering mechanisms. See *Siebel Analytics Server Administration Guide* on using variables in the repository.

Table 51. 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 (transactional database)		X	
Revenue Fact		X	
—Closed Revenue		X	X
—Opportunity Revenue		X	X
—Expected Revenue		X	X
Funds (Through Accts) (Consumer Goods)			X
Promotions (Through Accts) (Consumer Goods)			X

Table 51. Security Configuration by Dimension

Dimensions Secured	Primary Owner	Primary Position	Org-based
Holdings (Financial Services & Life Sciences)		X	
Households			X
Opportunity		X	X
Orders		X	X
Organization (transactional database)		X	
Programs			X
Quotes		X	X
Responses	X		
Review Or Objective (transactional database)		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 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. See *Security Guide for Siebel eBusiness Applications*.

This topic 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 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 when a user logs in.

   For example, the user's primary position ID. See "Initialization Blocks and Security-Related Information in Analytics" on page 234.

2. Set up the filters for each security group on each logical table that needs to be secured.

   See "Filters For Analytics Security Groups" on page 235.

3. Set up the joins to the appropriate security tables in the metadata physical and logical layers.

   See "Configuring Analytics Repository Table Joins for Security" on page 235.

Initialization Blocks and Security-Related Information in Analytics

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.

- 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.

- 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.

Filters For Analytics Security Groups

In addition to initialization blocks that implement data-level security in the Analytics repository, there are 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
- Primary Org-based Security

Table 51 shows the logical tables (dimensions) and the kind of security applied to those tables.

An example of how the Opportunity Dimension may be configured is:

```
"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.

Configuring Analytics Repository Table Joins for Security

You can add security to a new dimension in Siebel Analytics. Set up the joins for that table to the appropriate security tables in the metadata physical and logical layers. The following task uses W_AGREE_D (Agreements) as an example.

To configure the physical table join between W_AGREE_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 the group and choose Properties.
   b. In the Properties dialog box, click the Permissions box and select the Filter tab.
   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.

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*.

Position and Organization Initialization Variables in 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

W_OPTY_PARTY.OPTY_ID = W_OPTY_ID.ROW_ID
```

In an alternate 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)

W_OPTY_PARTY.PARTY_ID = W_PARTY_LOGIN.PARTY_ID

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. For more information about the Siebel data model and security, see *Siebel Data Warehouse Data Model Reference* and *Siebel Data Warehouse Data Model Reference for Industry Applications*.

Default Security Settings in 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 Operational Applications Security

Siebel operational applications include Siebel Sales, Siebel Service, and Siebel Partner Relationship Management. This topic describes the additional security configurations that may be necessary for your Siebel operational applications. It also describes the particular responsibilities associated with the application dashboards. The process includes the following topics:

- "Siebel Sales Analytics Security Settings" on page 238
- "Siebel ERM Analytics Security Settings" on page 240
- "Siebel Partner Relationship Management Analytics Security Settings" on page 242

Siebel Sales Analytics Security Settings

Siebel Sales Analytics defaults to the following data-level visibility for certain responsibilities, as shown in Table 52 on page 238.

Responsibilities and Data-Level Visibility in Sales 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 Analytics Applications" on page 225 and *Security Guide for Siebel eBusiness Applications*.

Table 52. 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 52. 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: ■ 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, see Table 51 and use the metrics and dimensions in Table 52 as examples.

Siebel ERM Analytics Security Settings

Siebel ERM Analytics is divided into Workforce, Partner Manager, and Partner Portal Analytics.

Responsibilities and Data-Level Visibility in Workforce Analytics Applications

Siebel Responsibilities for Workforce Analytics are shown in Table 53 on page 240.

Table 53. 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	
ERM Analytics User	SSO ERM Dashboard View	SSO ERM Executive Dashboard	Employee Performance	My Performance	Workforce Summary
					Workforce Training
					Workforce Performance

Table 53. Siebel Responsibilities for Workforce Analytics

Responsibility	View Name	SSO Symbolic URL Name	Dashboard Name	Viewable Pages	Subject Areas
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 53 also outlines the symbolic URL names for Workforce Analytics. To change or to update these symbolic URLs with more dashboards, see the section "Customizing Analytics Content on the Siebel Operational Application Home Page" on page 215.

Siebel Partner Relationship Management Analytics 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 topic 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 Analytics Dashboard Mapping

Table 54 on page 242 provides the dashboard and page tab mapping for specific responsibilities in the Siebel PRM Partner Manager application.

Table 54. 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 54. 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	Overview
	Channel Customers	Sales
	Customer Marketing	Effectiveness
	Customer Marketing	Responses
	Customer Marketing	ROI

Table 54. 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

Siebel Partner Portal Role-Based Analytics Dashboard Mapping

The dashboard and page tab mapping for specific responsibilities in the Siebel PRM Partner Portal application are shown in Table 55 on page 245.

Table 55. 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 55. 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 10, "Configuring User Authentication and Security in Siebel Analytics."

The subject area visibility for responsibilities in Partner Manager are shown in Table 56 on page 246, where a X indicates that subject area is visible for the user holding that responsibility.

Table 56. 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

Table 56. 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
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	

PRM Analytics Subject Area Visibility

The subject area visibility for roles in Partner Portal is shown in Table 57 on page 247, where a X indicates that subject area is visible for the user holding that responsibility.

Table 57. 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

Table 57. 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
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

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 topic "Integrated Security for Responsibilities and Groups in Analytics Applications" on page 225.

Table 58 on page 248 shows the data-level security settings included for the responsibilities in Partner Manager and Partner Portal. To change Partner Service Representative and Sales Representative to Organization-based security, follow the procedure shown in "Changing the Security Group from Position-Based to Organization-Based in Analytics" on page 249.

Table 58. 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
Channel Marketing Manager Analytics User	No	N/A	N/A

Table 58. Siebel PRM Data-Level Security Settings

Responsibility	Data-Level Security	Type	Comments
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.

Changing the Security Group from Position-Based to Organization-Based in Analytics

By default in Siebel PRM Analytics, 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 Server 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 Server Administration Tool.

Siebel Industry Applications Security Settings

The following topics describe the additional security configurations that may be necessary for your Siebel Industry Applications when run with Siebel Analytics. They also describe the particular responsibilities associated with the application dashboards.

- "Consumer Sector Analytics Security Settings" on page 250
- "Communications, Media, and Energy (CME) Analytics Security Settings" on page 251
- "Financial Services Analytics Security Settings" on page 252
- "Life Sciences Analytics Security Settings" on page 254
- "Usage Accelerator Analytics Security Settings" on page 257

Consumer Sector Analytics Security Settings

Table 59 on page 250 describes the consumer sector responsibilities associated with each CS Dashboard.

Table 59. 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) Analytics Security Settings

Siebel Communications, Media, and Energy Analytics applies the Siebel operational applications security model. That is, it uses Siebel operational applications responsibilities (and corresponding repository and Web catalog groups) for controlling access to Siebel operational applications objects (both metadata and Web catalog objects). This security model is described in "Integrated Security for Responsibilities and Groups in Analytics Applications" on page 225.

In addition to responsibilities provided by the Siebel operational applications, Siebel Communications, Media, and Energy (CME) provides additional responsibilities, and responsibility-specific security, as indicated in Table 60 on page 251.

Table 60. 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	■ Customer Lifetime Value ■ Churn Propensity ■ Selling Propensity ■ Financial Risk ■ Actual Churn
Sales Analytics	CM Sales Analytics User CM Sales Analytics Administrator	Revenue Management	■ Sales Portal ■ Service Activations ■ Service Modifications ■ Service Disconnections
		Account Management	■ Sales Portal ■ Service Activations ■ Service Modifications ■ Service Disconnections
Service Analytics	CM Service Analytics User CM Service Analytics Administrator	Account Management	■ Trouble Tickets ■ Customer Satisfaction

Financial Services Analytics Security Settings

Siebel Finance Analytics, Insurance Analytics, and Healthcare Analytics apply the Siebel operational applications security model. That is, they use Siebel operational applications responsibilities (and corresponding repository and Web Catalog groups) for controlling access to Siebel operational applications objects (both metadata and Web catalog objects). This security model is described in "Integrated Security for Responsibilities and Groups in Analytics Applications" on page 225.

In addition to responsibilities provided by the Siebel operational applications, Siebel Finance Analytics, Insurance Analytics, and Healthcare Analytics provide additional responsibilities, and responsibility-specific security, as indicated in Table 61 on page 253.

For the Financial Services products mentioned, the Siebel operational 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 operational applications responsibilities and groups to control access to Finance-specific objects in Finance 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 Insurance and Healthcare Analytics.

For example, when you give a user all horizontal Sales responsibilities and also include the finance responsibility called Finance Analytics User, this user is 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 61 on page 253.

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 61 on page 253 shows the additional responsibilities, and responsibility-specific security in Siebel Finance Analytics, Insurance Analytics, and Healthcare Analytics. If you are also deploying Usage Accelerator, Financial Services-specific Usage Accelerator responsibilities are shown in Table 63 on page 257.

Table 61. 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
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 Analytics Security Settings

This topic covers security in Life Sciences Analytics.

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 Position ID. The Siebel Data Warehouse stores the user-to-position relationship in the W_PARTY_LOGIN table. A user sees only the data 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 dimension data only, such as:

- Time Period
- Product
- Invitee Status

Table 62 on page 254 shows Pharma Analytics Responsibilities and Functions.

Table 62. Pharma Analytics Responsibilities and Functions

Responsibility	Use
LS Administrator	Administrator privileges to all options on Pharma Analytics.
PH Call Activity Analytics Admin	Administrator privileges to Call Activity Analytics option.
PH EMEA Call Activity Analytics User	Enables brick-based metrics to be used in the Web Catalog for Pharma subject areas. Note that in the 7.7 Analytics Release, all report columns use position-based hierarchies, where in earlier releases, report columns used alignment-based sales hierarchies. All brick-based alignment pages have been removed from the reports. Therefore, if you want to use brick-based position hierarchies, you must reconfigure the reports to maintain the alternate hierarchy.
PH EMEA Executive Analytics User	Enables brick-based metrics to be used in the Web Catalog for Pharma subject areas. Note that in the 7.7 Analytics Release, all report columns use position-based hierarchies, where in earlier releases, report columns used alignment-based sales hierarchies. All brick-based alignment pages have been removed from the reports. Therefore, if you want to use brick-based position hierarchies, you must reconfigure the reports to maintain the alternate hierarchy.

Table 62. Pharma Analytics Responsibilities and Functions

Responsibility	Use
PH EMEA Marketing Analytics User	Enables brick-based metrics to be used in the Web Catalog for Pharma subject areas. Note that in the 7.7 Analytics Release, all report columns use position-based hierarchies, where in earlier releases, report columns used alignment-based sales hierarchies. All brick-based alignment pages have been removed from the reports. Therefore, if you want to use brick-based position hierarchies, you must reconfigure the reports to maintain the alternate hierarchy.
PH EMEA Sales Analytics User	Enables brick-based metrics to be used in the Web Catalog for Pharma subject areas. Note that in the 7.7 Analytics Release, all report columns use position-based hierarchies, where in earlier releases, report columns used alignment-based sales hierarchies. All brick-based alignment pages have been removed from the reports. Therefore, if you want to use brick-based position hierarchies, you must reconfigure the reports to maintain the alternate hierarchy.
PH Executive Analytics Admin	Unrestricted access to all Pharma Analytics options with ZIP territories.
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 Medical Education Analytics Admin	Administrator privileges to Medical Education Analytics option.
PH Medical Education Analytics User	Enables access to Medical Education Analytics option.
PH Mobile Analytics Admin	Administrator privileges to the PH Mobile Manager Analytics User and Sales Rep Analytics Dashboards.
PH Mobile Analytics User	Enables the Disconnected Pharma Home Page, and access to Sales Rep Dashboard as part of the Sales Rep Analytics option.
PH Mobile Manager Analytics Admin	Administrator privilege to the PH Mobile Manager Analytics User and District Manager Analytics Dashboards.
PH Mobile Manager Analytics User	Enables the Disconnected Pharma Home Page, and access to the District Manager Dashboard as part of the Sales Rep Analytics option.
PH Sales Analytics Administrator	Administrator privileges to Rx Sales Analytics option.

Table 62. Pharma Analytics Responsibilities and Functions

Responsibility	Use
PH US Call Activity Analytics User	Enables access to Call Activity Analytics Option for ZIP territory alignments.
PH US Executive Analytics User	Unrestricted access to all Pharma Analytics options with ZIP-based territories.

Usage Accelerator Analytics Security Settings

In this topic, Table 63 on page 257 describes the additional security configurations that may be necessary and the particular responsibilities associated with the Siebel Usage Accelerator application dashboards.

Table 63. Usage Accelerator Responsibilities and Dashboards

User Responsibility	Data Level Security	Dashboard Name (View)	Dashboard Page
Usage Accelerator–Sales Rep	Primary Position Data Level Security	Score Card	Individual Scorecard
Usage Accelerator–Financial Services Sales Rep		Action Plan	Account Coverage Contact Coverage Opportunity Coverage Financial Account Coverage—Financial Services only Account Completeness Contact Completeness Opportunity Updates
Usage Accelerator–Sales Manager	No position-based Security	Score Card	Team Scorecard Individual Scorecard
		Action Plan	Account Coverage (Team) Contact Coverage (Team) Opportunity Coverage (Team) Financial Account Coverage (Team) —Financial Services only Account Completeness (Team) Contact Completeness (Team) Opportunity Updates (Team)
Usage Accelerator–Financial Services Sales Manager		Coverage	Account Coverage Account Coverage (Team) Contact Coverage Opportunity Coverage Financial Account Coverage—Financial Services only
		Completeness	Account Completeness Contact Completeness
		Opportunity Updates	Opportunity Updates
		User Adoption	Active Users Application Usage—excluded for Financial Services Application Usage—Financial Services only*

Table 63. Usage Accelerator Responsibilities and Dashboards

User Responsibility	Data Level Security	Dashboard Name (View)	Dashboard Page
Usage Accelerator–Sales Executive	No position-based Security	Scorecard	Organization Scorecard Individual Scorecard
Usage Accelerator–Financial Services Sales Executive		Action Plan	Account Coverage (Org) Contact Coverage (Org) Opportunity Coverage (Org) Financial Account Coverage (Org)—Financial Services only Account Completeness (Org) Contact Completeness (Org) Opportunity Updates (Org)
Usage Accelerator–Administrator		Coverage	Account Coverage Contact Coverage Opportunity Coverage Financial Account Coverage—Financial Services only
Usage Accelerator–Financial Services Administrator		Completeness	Account Completeness Contact Completeness
		Opportunity Updates	Opportunity Updates
		User Adoption	Active Users Application Usage (excluded for Financial Services) Application Usage—Financial Services only Although the Application Usage dashboard names appears similar, the Application Usage—Financial Services-only version of this dashboard is different from the other dashboard.

16 Configuring Metadata for Analytics Applications

Siebel applications are shipped with certain Siebel Analytics metadata. These metadata repositories are included with Siebel operational applications and Siebel Industry Applications. 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.

This chapter describes configuration necessary for the Siebel Analytics metadata for Siebel operational applications, specifically those areas that a Siebel administrator may need to adjust for Analytics purposes. These administrative tasks generally cover two areas:

- Dashboard content of Siebel operational applications Analytics
- Metadata reporting requirements for Siebel operational applications Analytics

The Siebel operational applications are built around a general business function, such as Siebel Sales, Siebel Service, and Siebel Call Center. Siebel Industry Applications are built around specific industries:

- Financial Services
- Consumer Sector
- Communications, Media, and Energy (CME)
- Life Sciences

NOTE: You are able to license one or more Siebel Industry Applications Analytics. Licensing permits you to restrict user access to particular dashboards, subject areas, and reports. See "About Analytics Applications Licensing" on page 280.

Configuring Analytics Metadata For Siebel Operational Applications

Configuration tasks for Siebel Analytics metadata used by Siebel operational applications include the following:

- "Updating Finance Analytics Logical Table Sources" on page 260
- "Externalizing Financial Services Metadata Translation Strings" on page 262
- "Disabling the Finance Analytics Logical Table Sources" on page 263
- "Enabling Dashboard Forecasting Charts" on page 264
- "Developing and Deploying Predictive Scores" on page 264
- "Configuring Siebel Applications for Attribute Analysis" on page 266

Updating Finance Analytics Logical Table Sources

In the Siebel Analytics Repository file, logical table sources are set by default to Siebel Finance Analytics, Siebel Healthcare Analytics, and Siebel Insurance Analytics settings. Before using these Financial Services Analytics applications, you must update the logical sources for two tables in the Siebel Analytics Repository file. These logical sources must be deactivated in order for Siebel Finance Analytics, Siebel Healthcare Analytics, and Siebel Insurance Analytics reports to point to the correct logical model and retrieve the correct data. Do this by deactivating the sources for the Fact-Asset logical table in the Core subject area and activating the FINS logical sources, as shown in the following procedure.

NOTE: Before performing the following procedure, shut down the Siebel Analytics Server.

To update Logical Table sources for Finance Analytics

1. Launch Server Administration Tool and open Siebel Analytics Repository (SiebelAnalytics.rpd).

   Go to the Business Model and Mapping window (the logical layer window) and open the Core folder.

   Scroll down to the Fact-Asset logical table and open its Sources folder.

2. In the list of logical table sources, right-click W_ASSET_F (FINS).

   Select Properties.

3. Click the General tab in the Properties window and make sure that the Active check box is checked.

   If it is not, check it.

4. In the list of logical table sources, right-click W_ASSET_F.

   Select Properties.

5 Click the General tab in the Properties window.

Make sure the Active check box is unchecked. If it is not, uncheck it.

Click OK and save the repository.

6 Restart Siebel Analytics Server.

Externalizing Financial Services Metadata Translation Strings

The Financial Services applications use a different set of translation strings from other Siebel operational applications.

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 Server 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.

   Double-click on the initialization block to open the Edit window.
6. 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]
   ```

   Click OK to commit the changes and save the repository.
7. Restart the Siebel Analytics Server.

Disabling the Finance Analytics Logical Table Sources

In the Siebel Analytics Repository file, logical table sources are set by default to Siebel Finance Analytics, Siebel Healthcare Analytics, and Siebel Insurance Analytics settings. If you are using any Siebel Industry application that is *not* Siebel Financial Services Analytics, you must first update the logical table sources in the Siebel Analytics Repository file.

These logical table sources must be deactivated in order for your Siebel Industry application Analytics reports to point to the correct logical model and retrieve the correct data. Do this by deactivating the FINS sources for the logical tables in the Core subject area and activating the other logical sources, as shown in the following procedure.

NOTE: Before performing the following procedure, shut down the Siebel Analytics Server.

To update Logical Table sources for general Siebel Industry Applications Analytics

1. Launch Server Administration Tool and open Siebel Analytics Repository (SiebelAnalytics.rpd).

   Go to Business Model and Mapping window (the logical layer window) and open the Core folder.

   Scroll down to the Fact-Asset logical table and open its Sources folder.

2. In the list of logical table sources, right-click W_ASSET_F (FINS).

   Select Properties.

3. Click the General tab in the Properties window and uncheck the Active check box.

4. In the list of logical table sources, right-click W_ASSET_F .

   Select Properties.

5. Click the General tab in the Properties window.

   Make sure that the Active check box is checked. If it is not, check it.

   Click OK and save the repository.

6. Restart Siebel Analytics Server.

Enabling Dashboard Forecasting Charts

Siebel Sales Analytics provides several forecasting analytics reports preconfigured in both the Pipeline and Sales Effectiveness dashboards. This feature performs real-time and historical analyses of forecast data to help manage each quarter's expectations and results.

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.
3. In the No Forecasting Web group, click Edit (this icon resembles a hand).

   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.

   Under the Group Membership section, click Add New Member and type the following group name in the Member Name box: Authenticated Users.
5. 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.

Developing and Deploying Predictive Scores

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.

The following procedure describes the process of developing and deploying these predictive scores.

To develop and deploy predictive scores

1. Generate predictive scores using any third-party predictive modeling application.

   NOTE: 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. After the scores are loaded into the Siebel Data Warehouse, map them 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.

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.

This configuration is performed in the Siebel operational application.

To configure the attribute sequence numbers

1. From the Siebel operational application Site Map, select Application Administration > Class Administration.
2. In the Classes form, select the class whose attributes are going to be analyzed.
3. Select the Dynamic attributes child level form, and from that menu select columns displayed.
4. Display the Analytics Sequence # column.
5. For each row in the Dynamic Attributes list, 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 on page 266 for all the classes whose attributes are to be analyzed.

Metadata Requirements for Analytics Applications

Some metadata needs to be set up properly in the Siebel transactional database for it to be displayed accurately in Siebel Analytics. The following sections discuss the metadata requirements for Siebel Analytics Applications:

- "Consumer Sector Metadata" on page 267
- "CME Metadata" on page 271
- "Life Sciences Analytics Metadata" on page 275

Consumer Sector Metadata

Siebel Consumer 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 topic covers each fundamental area of Consumer Goods Analytics and provides tips for data entry for effective analytics.

Consumer Goods Dashboards and Pages

The Consumer Goods dashboards and pages available to the end user are described in Table 64 on page 267.

Table 64. 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.

Table 64. Consumer Goods Dashboards and Page Tabs

Dashboard	Page	Function
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.
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. For example, What percentage of total sales is in each category? What products are selling where by whom?

Table 64. 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. For example, 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. For example, Which category is best promoted at my accounts? How are my store conditions trending? Are out of stocks preventing me from reaching my targets?

Consumer Goods Data Requirements

The data requirements for the Consumer Goods–specific portion of the data model are detailed in Table 65 on page 269. This includes the fund, promotion, performance and retail audit schema.

Table 65. 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 needs to be pushed to the promoted product level to be accurately stored in the Siebel Data Warehouse.

Table 65. Data Requirements for Consumer Goods Schema

Page	Function
Performance	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 list. 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 are combined during the building of the data warehouse.
Retail Audit	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. 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.

CME Metadata

Siebel Communications, Media and Energy (CME) Analytics contains corresponding industry-specific metadata. In the 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 login to Siebel using one of the CME responsibilities listed in Table 60 on page 251. These responsibilities also determine what subject areas the user may access.

CME Dashboards and Pages

Communications, Media and Energy (CME) industry-specific Analytics dashboards and pages are shown in Table 66 on page 271.

Table 66. 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 66. 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.

CME Data Requirements

The data requirements for each of the Communications, Media and Energy dashboards are detailed in Table 67 on page 272.

Table 67. 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 "Developing and Deploying Predictive Scores" on page 264 for more information.

Table 67. Data Requirements for Communications, Media and Energy Dashboards

Dashboard	Function
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.

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 topic explains these potential extensions.

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 are 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 are 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.

NOTE: For more information, see release notes documentation for Siebel Communication, Media and Energy Analytics, and Siebel Interactive Selling Suite Analytics.

Life Sciences Analytics Metadata

For Siebel Life Sciences applications using Siebel Analytics, the following topics describe configurations necessary to Life Sciences metadata:

- "Configuring Dimensions Common to All Subject Areas" on page 275
- "Configuring Dimensions Specific to Life Sciences Subject Areas" on page 278:

Configuring Dimensions Common to All Subject Areas

Although the following dimensions are used in all subject areas, this section describes the configuration necessary for Pharma Analytics applications:

- "Positions Dimension" on page 275
- "Alignments Dimension" on page 276
- "Products Dimension" on page 277
- "Product Costs Dimension" on page 277

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 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 68 on page 276.

Table 68. 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 69 on page 277.

Table 69. 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, as shown in Table 70 on page 277.

Table 70. 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 topic discusses the subject areas used by Pharma Analytics:

- "Pharma Sales Effectiveness" on page 278
- "Pharma Product Categories" on page 278
- "Pharma Promotional Effectiveness" on page 279
- "Pharma Medical Education Effectiveness" on page 279
- "Pharma Customer Demographics" on page 279
- "Pharma Objectives Achievement" on page 279

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.

Pharma 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 71 on page 278 lists the categories that need to have the Usage Type field populated in the Catalog Admin Category Detail list.

Table 71. 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 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 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. 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.

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. Actual target numbers per contact and account need to be populated in the Pharma Campaign Target Account List or the Pharma Campaign Target Professional List Toggle.

About Analytics Applications Licensing

If you have purchased a Siebel Analytics application, the license keys for that application generate the Siebel Analytics repository (.rpd) file. For example, if you did not license Siebel Delivers, this product is not installed. For more information, see "Siebel Analytics Server Licensing Required By Other Siebel Programs" on page 29.

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 are able to view and use only those Siebel Analytics dashboards, subject areas, and reports related to Sales Analytics. See also "How Analytics Applications Licensing Affects Repository Size" on page 29.

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.

17 Installing the Disconnected Analytics Client and Briefing Book Reader

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.

NOTE: Disconnected Analytics Platform is also referred to as Mobile Analytics. For the Siebel Pharma applications, Pharma Field Analytics is a prebuilt Mobile Analytics application for Siebel Pharma Sales.

The tasks covered in this chapter are:

- "Installing the Analytics Disconnected Client" on page 281
- "Running Disconnected Client in Silent Mode" on page 283
- "Configuring Pharma Field Analytics Client ODBC DSN" on page 283
- "Installing Briefing Book Reader" on page 284

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

Installing the Analytics Disconnected Client

Siebel Disconnected Analytics Client allows laptop users to access data and reports when not connected to the network-based Siebel Analytics Server. For information about how mobile users typically use the Disconnected Analytics Client, see *Disconnected Analytics Online Help*. You install the Siebel Disconnected Analytics Client on laptop computers.

NOTE: Do not confuse Siebel Disconnected Analytics Client installation with the enterprise (Siebel Analytics Server) installation. See also the information on setting up Disconnected Analytics in *Siebel Analytics Server Administration Guide*.

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 and displays the Disconnected Client option.

CAUTION: Do not install the Disconnected Analytics Client at the same time, or on the same machine, as the rest of the Siebel Analytics components. Install the Client before or after you have installed the other Siebel Analytics components, and on a different machine.

Note the following additional Web server requirements for Disconnected Analytics Client:

- Install the standard Siebel Analytics Server on a network machine in order to work with Disconnected Analytics.
- If the Web server is Sun ONE (formerly iPlanet) and it is running on Solaris, configure this server as shown in "Configuring Sun ONE for Analytics Disconnected Client" on page 130.

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, as shown in the following table of installation wizard screens for the Disconnected Client.

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. **CAUTION:** Do not install the Disconnected Client on the same machine with Siebel Analytics. Install them on two separate machines.
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 (preinstallation)	A list of the Disconnected Client components and the directory where they are to 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.
Summary Information (postinstallation)	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 shuts down and restarts. If you click No..., you need to restart the computer before you use Siebel Analytics.

Running Disconnected Client in Silent Mode

After you install Siebel Analytics Disconnected Client, you can make it run automatically in silent mode (in the background).

In order to run Disconnected Analytics Client in silent mode easily, create a new Start menu shortcut, as shown in the following procedure.

To create a Start menu shortcut for Disconnected Client silent mode

1. Right-click Start and select Explore. Start Menu should be highlighted.
2. In the right pane, double-click Programs.
3. In the right pane, double-click Siebel Analytics.
4. Right-click Siebel Disconnected Analytics and select Create Shortcut.
5. Rename the new shortcut to Siebel Disconnected Analytics Silent Mode.
6. Right-click Siebel Disconnected Analytics Silent Mode and select Properties.
   a. In the Shortcut tab Target field, at the end of the existing path, add the following:

      /s

      Be sure to include the leading space.

   b. Click Apply and close the window.

After you have created the shortcut, use it to start Disconnected Analytics Client, as shown in the following procedure.

To start Disconnected Client in silent mode

- Navigate to Start > Programs > Siebel Analytics > Siebel Disconnected Analytics Silent Mode.

Configuring Pharma Field Analytics Client ODBC DSN

Siebel Pharma Field Analytics Client is the Disconnected Analytics client for the Siebel Pharma application. Whenever a Pharma Field Analytics user logs on to Disconnected Analytics, the user name and password are authenticated using SQL Anywhere against a Siebel transactional database table. In order for Pharma Field Analytics to work in an integrated environment, you must configure SIEBEL_OLTP (the ODBC Data Source Name or DSN) on the client machine.

The following configuration provides connectivity between the Pharma Field Analytics application and the mobile client Siebel transactional database.

To configure the Siebel Pharma Field Analytics client SIEBEL_OLTP DSN

1. Navigate to Start > Programs > Administrative Tools > Data Sources (ODBC).

   Click System DSN tab.

2. Click Add button.

3. Select Adaptive Server Anywhere 8.0.

   Click Finish.

4. In Data source name field, enter SIEBEL_OLTP.

   NOTE: Make sure the user has appropriate Analytics responsibilities checked.

5. Click Database tab, and then click Browse.

   In the Database file field, point to the local database on the client machine.

6. Click OK to exit the Administrative Tool.

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 DVD.

To install the Siebel Analytics Briefing Book Reader under Windows

1. From the installation DVD 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.

Screen	Your Action
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 (preinstallation)	The directory where Briefing Book Reader is to be installed is shown. Click Next.
Installing	Placeholder screen that appears while the installer installs all the features you have selected. Click Next when done.
Summary Information (postinstallation)	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 User Guide*.

A NQSConfig.INI File Reference

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 appendix lists the rules for using the file and provides the definitions and syntax of each parameter, under the following topics:

- "Location of the Siebel Analytics Configuration Initialization File" on page 287
- "Rules for Siebel Analytics Configuration File Parameters" on page 287
- "Siebel Analytics Configuration File Parameters and Syntax" on page 289

NOTE: For information about the clustering configuration file, see Appendix B, "NQClusterConfig.INI File Reference."

Location of the Siebel Analytics Configuration Initialization File

The NQSConfig.INI file is located in the subdirectory `$INSTALLDIR\Config`.

CAUTION: Do not change the name of the file or its location.

To review your own NQSConfig.INI file, navigate to the Config subdirectory and open the file.

For detailed explanations of the parameters, see "Siebel Analytics Configuration File Parameters and Syntax" on page 289. All parameter explanations are targeted towards the Windows environment.

Rules for Siebel Analytics Configuration File Parameters

The Siebel Analytics Server reads the initialization file each time it is started.

If a Siebel Analytics Server 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.

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 prevent the Siebel Analytics Server from starting up. The errors are logged to the NQServer.log file.

Adding Comments to the Siebel Analytics 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.

Changing Siebel Analytics 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.

To edit the NQSConfig.INI initialization file

1. Use a text editor to edit this file.

   NOTE: The examples in this appendix assume you are editing a Windows version of this file, so make the necessary substitutions in terms of UNIX file system paths and conventions.

2. Save and close the NQSConfig.INI file.

Siebel Analytics Configuration File Parameters and Syntax

This topic lists the NQSConfig.INI file parameters and gives a brief description and any required syntax for each parameter. The parameters are generally listed in the order they appear in the configuration file.

The parameters are grouped as follows:

- "Parameters in the Configuration File Repository Section" on page 290
- "Parameters in the Configuration File Cache Section" on page 291
- "Parameters in the Configuration File General Section" on page 294
- "Parameters in the Configuration File Security Section" on page 302
- "Parameters in the Configuration File Server Section" on page 304
- "Parameters in the Configuration File Dynamic Library Section" on page 309
- "Parameters in the Configuration File User Log Section" on page 310
- "Parameters in the Configuration File Usage Tracking Section" on page 311
- "Parameters in the Configuration File Optimization Flags Section" on page 315

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, see 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. The maximum capacity for each path is 4 GB. 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 be unique for each server defined as a cluster participant.

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 "Changing the Account Under Which a Windows Service Runs" on page 57.

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.)

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" 100MB,
"f:\SiebelAnalytics\cache" 200MB ;
```

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.

The disk space requirement for the cached data depends on the number of queries that produce cached entries and the size of the result sets for those queries. The query result set size is calculated as row size (or the sum of the maximum lengths of all columns in the result set) times the result set cardinality (that is, the number of rows in the result set). The expected maximum should be the guideline for the space needed.

This calculation gives the high-end estimate, not the average size of all records in the cached result set. Therefore, if a result set's size is dominated by variable length character strings and if those strings' lengths have a normal distribution, you would expect the average record size to be about half of the maximum record size.

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 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 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 are not 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 1000.

Example: MAX_CACHE_ENTRIES = 1000 ;

POPULATE_AGGREGATE_ROLLUP_HITS

Specifies whether to aggregate data from an earlier cached query result set and create a new entry in the query cache for rollup cache hits. The default value is NO.

A Siebel Analytics user may have a cached result set containing information at a particular level of detail (for example, sales revenue by ZIP Code). A second query may ask for this same information, but at a higher level of detail (for example, sales revenue by state). Siebel Analytics can satisfy this second query by aggregating data from the first result set stored in the cache. That is, Siebel Analytics sales revenue for all ZIP Codes in a particular state can be added to obtain the sales revenue by state. This is referred to as a rollup cache hit.

Normally, a new cache entry is not created for queries that result in cache hits. You can override this behavior specifically for cache rollup hits by setting POPULATE_AGGREGATE_ROLLUP_HITS to YES. Nonrollup cache hits are not affected by this flag. If a query result is satisfied by the cache—that is, the query gets a cache hit—then this query is not added to the cache. If this parameter is set to YES, then when a query gets an aggregate rollup hit (for example, "sales by region" is answered from "sales by district, region") then the result is put into the cache. Setting this parameter to TRUE may result in better performance, but results in more entries being added to the cache.

Example: POPULATE_AGGREGATE_ROLLUP_HITS = NO ;

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 in the following sections, 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=”dutch,” then names of days and months are returned from the server in Dutch. The localized message strings are written to various log files as well as returned to the user as error messages.

NOTE: Do not confuse these two-letter Siebel Analytics language extensions with the Siebel operational applications three-letter language codes shown in *Siebel System Requirements and Supported Platforms* on the Siebel SupportWeb Knowledge Base.

The supported values for LOCALE and SORT_ORDER_LOCALE are shown in Table 72 on page 294.

Table 72. Supported Languages for LOCALE and SORT_ORDER_LOCALE

Supported Language
Chinese-simplified
Chinese-traditional
Czech
Danish
Dutch
English-USA
Finnish
French
German
Italian
Japanese
Korean
Portuguese
Portuguese-Brazilian

Table 72. Supported Languages for LOCALE and SORT_ORDER_LOCALE

Supported Language
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. The language extensions for all supported languages are shown in Table 73 on page 295.

Example: `LOCALE = "english-usa" ;`

Table 73. Siebel Analytics Language Extensions

Language Extension	Language
cs	Czech
da	Danish
de	German
en	English
es	Spanish
fi	Finnish
fr	French
it	Italian
ja	Japanese
ko	Korean
nl	Dutch
pt	Portuguese
pt-br	Brazilian Portuguese
sv	Swedish
zh	Chinese (Simplified)
zh-tw	Chinese (Traditional)

For more information about Analytics Catalog Manager and language extensions, see *Siebel Analytics Web Administration Guide*.

SORT_ORDER_LOCALE

Used to help determine whether the Siebel Analytics Server can function-ship an ORDER BY clause (used in sorting) to an relational database.

Every database defined in the Physical Layer in the 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.

In the Server Administration Tool, the Database dialog > Features tab > Features table 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 the parameters shown in Table 74 on page 296.

Table 74. Critical SORT_ORDER_LOCALE Parameters

Functional Category	Specific Parameters
Base language	LOCALE
	SORT_ORDER_LOCALE **NOTE:** 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.
Case	CASE_SENSITIVE_CHARACTER_COMPARISON
Binary versus linguistic comparison	SORT_TYPE

The SORT_ORDER_LOCALE entries in the Features table and in the NQSConfig.INI file match only if the database and the Siebel Analytics Server have matching settings in these areas. If they do not match, wrong answers can result when using multidatabase joins, or errors can result when using the Union, Intersect and Except operators, which all rely on consistent sorting between the back-end server and the Siebel Analytics Server.

Example: `SORT_ORDER_LOCALE = "english-usa" ;`

SORT_ORDER_LOCALE Under UNIX Operating Systems

The Analytics Server sets the C-runtime locale during server startup. A value for the setting is specified using the SORT_ORDER_LOCALE entry in the NQSConfig.INI file. See the procedure in "Setting SORT_ORDER_LOCALE (UNIX)" on page 122.

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.

This setting affects all comparisons that occur within the Siebel Analytics Server. The following operators are affected:

- Order By
- Group By
- Distinct
- Join
- comparisons (<, >, =, <=, >=, <>)

For example, consider the following three terms:

- ACME
- DELTA
- acme

An Order By with case-sensitive setting results in rows in the order shown in the preceding example. An Order By with case-insenstive setting results in ACME and acme being adjacent.

If the term is case-sensitive and you perform a duplicate remove (Distinct), the result is three rows. If the term is not case-sensitive, then the Distinct result is two rows.

CASE_SENSITIVE_CHARACTER_COMPARISON should be set to correspond with how the back-end database deals with case. For example, if the back-end database is case-insensitive, then Siebel Analytics Server should be configured to be case-insensitive. If Siebel Analytics Server and the back-end database are not similarly case-sensitive, some subtle problems can result.

Example: `CASE_SENSITIVE_CHARACTER_COMPARISON = OFF ;`

UPPERCASE_USERNAME_FOR_INITBLOCK

Specifies whether 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 "Changing the Account Under Which a Windows Service Runs" on page 57.

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 improves 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 topic "How the SIZE Parameters Affect Siebel Analytics Performance" on page 300.

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 increases by the value specified until it reaches the value of SORT_MEMORY_SIZE. For more information, see the topic "How the SIZE Parameters Affect Siebel Analytics Performance" on page 300.

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 multiuser environment. For more information, see the topic "How the SIZE Parameters Affect Siebel Analytics Performance" on page 300.

Example: `VIRTUAL_TABLE_PAGE_SIZE = 128 KB ;`

How the SIZE Parameters Affect Siebel Analytics Performance

This topic 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 performs 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

  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.

USE_LONG_MONTH_NAMES

Specifies whether month names are 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

Specifies whether day names are 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 ;`

UPPERCASE_USERNAME_FOR_INITBLOCK

Specifies whether 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 ;`

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 ;`

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.

MINIMUM_PASSWORD_LENGTH

A security measure used to enforce strong passwords. The minimum length is enforced when a user logs in. For example, if MINIMUM_PASSWORD_LENGTH is set to 6, then any user's password is rejected unless it has at least 6 characters. The default value is zero.

Example: `MINIMUM_PASSWORD_LENGTH = 6 ;`

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.

The consequences of each authentication type is shown in Table 75 on page 303.

Table 75. Siebel Analytics Server Authentication Types

Type	Description
NQS	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.
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 into the Siebel Analytics Server, the submitted logon name and password is used to connect to the database. If this connection succeeds, the user is considered to be successfully authenticated.
BYPASS_NQS	Authentication is against the database to which user queries are sent, using the submitted user name and password. For example, if a user runs a query tool against the Siebel Analytics Server with the user name of "Test" and a password of "Test," this user name 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 user name used to log in, as appropriate.

Example 1: `AUTHENTICATION_TYPE = NQS ;`

Example 2: `DATABASE = "Goldmine" ;`

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.

MAX_SESSION_LIMIT

Specifies the maximum number of connections allowed by the server. If this number is exceeded, the server refuses 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 are, per session, at the same time. The limit is 65535 logical requests per session.

NOTE: Usually, individual users have only one open request per session at the same time. Application programs and Siebel Analytics Web, however, typically have more than one open at the same time. In general, the default value of 500 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 = 500 ;`

SERVER_THREAD_RANGE

For each Siebel Analytics Server request, SERVER_THREAD_RANGE 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 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 Siebel Analytics Server Database Gateway thread. The default of 0 sets the stack size as 256 KB in Windows NT.

Example: `DB_GATEWAY_THREAD_STACK_SIZE = 0 KB ;`

MAX_EXPANDED_SUBQUERY_PREDICATES

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;`

NOTE: For the parameters MAX_QUERY_PLAN_CACHE_ENTRIES, MAX_DRILLDOWN_INFO_CACHE_ENTRIES, and MAX_DRILLDOWN_QUERY_CACHE_ENTRIES, the default values are set to 1024 by default. These values should not be raised without consulting Siebel Support.

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 = 1024 ;`

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 = 1024 ;`

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 = 1024 ;`

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

Specifies the number of management threads to allocate for managing Siebel Analytics Server client/server communications. The default client/server communication method for Siebel Analytics Server is TCP/IP. The default value of 5 is sufficient for server communications with the Server Administration Tool and when Siebel Analytics Web is the only main client process.

To support this method, a Port field has been added to the Enter Logon Information screen in Siebel Analytics ODBC Wizard. (Siebel Analytics D/COM support is limited; it is recommended that you use TCP/IP by default.)

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 are consumed.

Example: `CLIENT_MGMT_THREADS_MAX= 10 ;`

RPC_SERVICE_OR_PORT

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.

NOTE: Do not disable the RPC Service. If you attempt to start Siebel Analytics Server on a machine where the RPC services or processes are not running, the application will not start and no log will be generated.

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

Enables optional hints to be passed along with a SQL statement to an Oracle database. The default is YES. Database hints are discussed in *Siebel Analytics Server Administration Guide*.

PREVENT_DIVIDE_BY_ZERO

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.

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" on page 307 and "REQUIRE_PUBLISHING_DIRECTORY" on page 307, 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, REPOSITORY_PUBLISHING_DIRECTORY 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 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 are 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 REPOSITORY_PUBLISHING_DIRECTORY parameter 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 he MASTER_SERVER parameter in the NQClusterConfig.INI file) needs to have read and write access to this directory. The Siebel Analytics Servers in the cluster (from the SERVERS parameter 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, REQUIRE_PUBLISHING_DIRECTORY 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 is logged in the NQServer.log file and the server shuts 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 joins the cluster and a warning message is logged in the NQServer.log file. Any online repository updates is not 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 is done infrequently and the goal is to keep the cluster operational even if some servers have stale repositories.

Example: `REQUIRE_PUBLISHING_DIRECTORY = YES;`

DISCONNECTED

When Siebel Analytics Server is being run as part of Disconnected Analytics, the DISCONNECTED parameter must be set to YES. The default is NO.

When DISCONNECTED is set to YES, only Disconnected Clients running on the same machine as the Disconnected Siebel Analytics Server are able to connect to it. Any Disconnected Client running on a different machine is unable to connect to the Disconnected Analytics server.

Example: `DISCONNECTED = NO ;`

AUTOMATIC_RESTART

Specifies whether the Siebel Analytics Server should be automatically restarted after a crash. Automatic restart is only applicable to a stand-alone Analytics Server; it does not apply to a clustered Analytics server environment, or to a Disconnected Analytics server. The default is YES.

Example: `AUTOMATIC_RESTART = YES ;`

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:

logical_name	A logical name for the dynamic link library. These logical names also appear in the Connection Pool dialog.
dynamic_library	The name of the associated dynamic library. These are located in the Bin subdirectory in the Siebel Analytics software installation directory.

Example: `ODBC200 = nqsdbgatewayodbc ;`

CAUTION: 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

The user log NQQuery.log is kept in the `$INSTALLDIR\Log` directory (together with the Install.log file and the NQServer.log file). It logs activity about queries when enabled for a user. Entries can be viewed using a text editor or the nQLogViewer executable.

For each log parameter, the following valid values apply:

Function Enabled	Function Disabled
ON	OFF
YES	NO

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. The default size is 10 MB. When this limit is reached, the log file closes, the log file is renamed to NQQuery.log.old, and logging resumes to a newly created NQQuery.log file.

Example: `USER_LOG_FILE_SIZE = 10 MB ;`

CODE_PAGE

Specifies the type of code page being used. The default is UTF8. Other values include any valid code page, such as ANSI, 1252, and so on. Enclose the value in double quotes.

Example: `CODE_PAGE = "UTF8" ;`

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 YES and NO. The default value is NO. When set to NO, statistics are not accumulated. When set to YES, statistics are accumulated for each logical query. The collection of usage tracking statistics is, by default, disabled.

Example: `ENABLE = NO ;`

DIRECT_INSERT

Specifies whether statistics are inserted directly into a database table or written to a local file. This parameter is operative only if ENABLE = YES. Direct insertion into a database table is recommended, therefore the default value is YES.

Example: `DIRECT_INSERT = YES ;`

Different parameters become valid depending on how DIRECT_INSERT is set. Table 76 on page 311 shows which parameters become valid for each DIRECT_INSERT setting. Following the table are descriptions of the parameters.

Table 76. Valid Parameters For DIRECT_INSERT Settings

DIRECT_INSERT Setting	Valid Parameter
YES	PHYSICAL_TABLE_NAME
	CONNECTION_POOL
	BUFFER_SIZE
	BUFFER_TIME_LIMIT_SECONDS
	MAX_INSERTS_PER_TRANSACTION
NO	STORAGE_DIRECTORY
	CHECKPOINT_INTERVAL_MINUTES
	FILE_ROLLOVER_INTERVAL_MINUTES
	CODE_PAGE

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.

The general structure of this parameter depends on the type of database being used.

- For SQL Server databases, use the following general structure:

  ```
  PHYSICAL_TABLE_NAME  = "<Database>"."<Catalog>"."<Schema>"."<Table>" ;
  ```

  Example:

  ```
  PHYSICAL_TABLE_NAME = "Siebel Analytics Usage"."Catalog"."dbo"."S_NQ_ACCT" ;
  ```

- For Oracle databases, use the following general structure:

  ```
  PHYSICAL_TABLE_NAME  = "<Database>"."<Schema>"."<Table>" ;
  ```

  Example:

  ```
  PHYSICAL_TABLE_NAME = "Siebel Analytics Usage"."dbo"."S_NQ_ACCT" ;
  ```

  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 remains in the buffer before it is issued to the usage tracking table. This time limit ensures that the Siebel Analytics Server issues 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 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 also increases 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 "Changing the Account Under Which a Windows Service Runs" on page 57. Valid values are any fully qualified pathname to an existing, writable directory.

The parameter STORAGE_DIRECTORY is valid only if the parameter DIRECT_INSERT is set to NO. 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 are 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 "date/time op string-literal" technically contains a date/time 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 date/time data type incompatibilities are 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 date/time incompatibilities are still 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;`

B NQClusterConfig.INI File Reference

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 appendix lists the rules for using the file and provides definitions and syntax for each parameter, under the following topics:

- "Location of the Siebel Analytics Cluster Configuration Initialization File" on page 317
- "Rules for the Siebel Analytics Cluster Configuration File Parameters" on page 318
- "Siebel Analytics Configuration File Cluster Section Parameter and Syntax" on page 319

NOTE: For information about the NQSConfig.INI file, see Appendix A, "NQSConfig.INI File Reference."

Location of the Siebel Analytics Cluster Configuration Initialization File

The NQClusterConfig.INI file is located in the subdirectory `$INSTALLDIR\Config`.

CAUTION: Do not change the name of the file or its location.

NOTE: All Siebel Analytics Servers and cluster controllers that are to participate in the cluster need to have configured NQClusterConfig.INI files.

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.

Rules for the Siebel Analytics Cluster Configuration File Parameters

The Siebel Analytics Server reads the NQClusterConfig.INI file after it reads the NQSConfig.INI file (when CLUSTER_PARTICIPANT 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 are 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.

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 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 the Siebel Analytics 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 affects 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 then take effect.

Adding Comments to the Siebel Analytics 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.

Siebel Analytics Configuration File Cluster Section Parameter and Syntax

The parameters in the Cluster section provide configuration information for the Siebel Analytics Cluster Server feature. The NQClusterConfig.INI file parameters are described in this topic. The parameters are listed in the order they appear in the configuration file.

ENABLE_CONTROLLER

This parameter is for machines that 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 is 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 nonkey, nonreserved words, or alphanumeric characters.

Example: `PRIMARY_CONTROLLER = SERVER01;`

SECONDARY_CONTROLLER

Identifies the machine acting as the secondary Cluster Controller. This is the computer that assumes 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 is not operational if the primary Cluster Controller is unavailable, although sessions already assigned do 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 nonkey, nonreserved 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 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 nonkey, nonreserved 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 Server Administration Tool connects 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 307 in Appendix A, "NQSConfig.INI File Reference.")

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 nonkey, nonreserved 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 causes 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 causes failures to be detected less rapidly. Decreasing the value may increase system overhead.

Example: `CONTROLLER_POLL_SECONDS = 5;`

MONITOR_CONTROLLER_PORT

Specifies the TCP 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, use the following guidelines:

- 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 TCP ports.

  NOTE: Do not specify the same port number as that specified for the MONITOR_SERVER_PORT (described below).

  Example: `MONITOR_CONTROLLER_PORT = 9700;`

MONITOR_SERVER_PORT

Specifies the TCP 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, use the following guidelines:

- 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 TCP ports.

  NOTE: Do not specify the same port number as that specified for the MONITOR_CONTROLLER_PORT (described above).

  Example: `MONITOR_SERVER_PORT = 9701;`

CLIENT_SERVER_PORT

Specifies the TCP 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, use the following guidelines:

- 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 TCP 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 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, use the following guidelines:

- 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 TCP 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 port number to use for intracluster communication. The default port is 9702. This parameter is required only under UNIX.

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, use the following guidelines:

- 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 TCP ports.

  Example: `SERVER_MANAGER_PORT= 9702;`

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