



SIEBEL[®] 7
eBusiness

**SIEBEL ANALYTICS
INSTALLATION AND
CONFIGURATION GUIDE**

VERSION 7.5.3, REV. A

SEPTEMBER 2004

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Introduction

Siebel Analytics has two major product configurations:

- Stand-Alone (Siebel Analytics platform)

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

- Integrated (Siebel Analytics applications)

You can configure Siebel Analytics applications to run with Siebel eBusiness Applications and with Siebel Industry Applications to use the Siebel Data Warehouse or prebuilt (and sometimes specialized) data warehouses.

NOTE: The Siebel Data Warehouse is also referred to as the Siebel Relationship Management Warehouse (RMW).

Siebel Analytics Installation and Configuration Guide provides information on installing and configuring all components of Siebel Analytics—both stand-alone and integrated. This section explains the audience for, and organization of, this guide.

NOTE: This version of the guide applies to the 7.5.3 release of Siebel Analytics and Siebel Data Warehouse. It does not apply to previous releases.

CAUTION: Siebel Analytics 7.5.3.140 does not support Windows XP Service Pack 2 or later service packs.

Product Modules and Options

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

Audience For This Guide

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

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

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

How This Guide Is Organized

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

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

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

The sequence of chapters in general follows the installation sequence. Within this general framework, some sections describe how to install on specific platforms (Windows, UNIX) and some sections describe how to configure or reconfigure certain components (Corda PopChart server). The last part of the book addresses configuration of specific deployments.

Accordingly, this book is organized in the following manner:

- [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment,”](#) through [Chapter 5, “NQClusterConfig.INI File Reference.”](#)

Installation and configuration of all forms of the product: stand-alone Siebel Analytics Server, Siebel Analytics integrated with Siebel eBusiness Applications and Siebel Industry Applications, the Siebel Data Warehouse, and the Siebel Analytics Bridges.

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

- [Chapter 6, “Siebel Analytics Applications Overview,”](#) through [Chapter 11, “Internationalization Considerations.”](#)

Configuration of Siebel Analytics integrated with Siebel eBusiness Applications and Siebel Industry Applications.

- [Chapter 10, “Siebel Industry Applications Analytics Metadata.”](#)

Configuration specific to Siebel Industry Applications.

Installation Options

Each type of installation is summarized in [Table 1](#).

NOTE: If you are installing a newer version of Siebel Analytics, uninstall the older version before installing the new version.

Table 1. Installation Options

| Installation Type | Major Tasks |
|--|--|
| <ul style="list-style-type: none">■ Windows—Stand-Alone Siebel Analytics | MDAC installation |
| | Run Analytics Installer |
| | (No Siebel Data Warehouse setup) |
| | Insert license keys |
| | Configure Internet Information Server |
| | Restart machine |
| | Create and configure Siebel Analytics tables |

Table 1. Installation Options

| Installation Type | Major Tasks |
|---|---|
| <ul style="list-style-type: none"> ■ Windows—Siebel Analytics Applications | MDAC installation |
| | Run Siebel Analytics Installer |
| | Set up Siebel Data Warehouse |
| | Insert license keys |
| | Configure Internet Information Server |
| | Restart machine |
| | Update seed data, if necessary |
| | Access Siebel Analytics options |
| | Change database connections |
| | Create a dedicated repository |
| | Initialize the Siebel eBusiness application |
| | Configure authentication and security settings |
| | Other Siebel eBusiness applications configuration |

Table 1. Installation Options

| Installation Type | Major Tasks |
|--|---|
| <ul style="list-style-type: none"> ■ UNIX—Stand-Alone Siebel Analytics | Installing Siebel Analytics Server: <ul style="list-style-type: none"> ■ Run Installer ■ Change environment variables ■ Test Siebel Analytics Server installation <hr/> Create and configure Siebel Analytics tables <hr/> Update Scheduler configuration <hr/> Post-installation changes for specific UNIX platforms <hr/> Installing Siebel Analytics Web: <ul style="list-style-type: none"> ■ Install and configure PopChart Image Server ■ Configure Xvfb for Siebel Delivers ■ Install Siebel Analytics Web Components ■ Install and configure Internet Information Server <hr/> Configure Siebel Analytics Server <hr/> Configure Siebel Analytics Web <hr/> Insert Siebel Analytics Web license keys <hr/> Install or upgrade Siebel Analytics Web Catalog |
| <ul style="list-style-type: none"> ■ UNIX—Siebel Analytics Applications | Same as for UNIX—Stand-Alone, plus the following: <hr/> Set up Siebel Data Warehouse from a machine running Windows |

Additional Documentation

To successfully install, configure, and maintain Siebel Analytics, consult the following documentation in addition to *Siebel Data Warehouse Installation and Administration Guide*:

- *System Requirements and Supported Platforms* on Siebel SupportWeb
- *System Requirements and Supported Platforms for Siebel Analytics* on Siebel SupportWeb
- *Siebel Data Warehouse Data Model Reference*
- *Siebel Analytics Web Administration Guide*
- *Siebel Analytics Server Administration Guide*
- *Siebel Analytics Message Reference*
- *Siebel Analytics Scheduler Guide*
- *Siebel Analytics Performance Tuning Guide*
- *Siebel Analytics User Guide*
- *Siebel Tools Online Help*

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

Revision History

Siebel Analytics Installation and Configuration Guide

Version 7.5.3, Rev. A

Table 2. Changes Made in Version 7.5.3, Rev. A

| Topic | Revision |
|--|---|
| <p>“Process of Installing Siebel Analytics on Separate Machines on Windows” on page 48</p> <ul style="list-style-type: none">■ “Installing Siebel Analytics on a Windows Web Server Machine” on page 48■ “Installing Siebel Analytics on a Windows Siebel Analytics Server Machine” on page 49■ “Configuring Oracle Databases for the Siebel Analytics Server Machine” on page 49■ “About Updating Row Counts in Native Databases” on page 51■ “Changing the Siebel Analytics Default ASP Page” on page 52 | <p>Added procedures for configuring certain components on multiple machines. The components include:</p> <ul style="list-style-type: none">■ Siebel Analytics Server■ Analytics Web Server■ Siebel operational application Web page■ Databases |

Table 2. Changes Made in Version 7.5.3, Rev. A

| Topic | Revision |
|--|--|
| Configuring Siebel Analytics for servers installed on multiple machines <ul style="list-style-type: none"> ■ “Configuring Siebel Analytics to Work with Siebel Web Extension” on page 194 ■ “Creating a Virtual IP Address for the Siebel Web Engine and Siebel Analytics Web” on page 195 ■ “Configuring Siebel Server to Work with Siebel Analytics ODBC on UNIX” on page 197 ■ “Using Analytics-to-Siebel eBusiness Application Action Links” on page 200 | Added sections describing the configurations necessary when running Siebel Analytics and Siebel Web Extension (SWE) on separate machines, in order for action links and interactive charts to work. Renamed this section, updating terms and adding procedures for configuring the feature for installation on multiple machines. |
| Siebel Analytics Web Server processes <ul style="list-style-type: none"> ■ “Stopping and Starting the Siebel Analytics Web Server on UNIX” on page 98 ■ “Configuring a Custom Name for a Virtual Web Server” on page 102 | <ul style="list-style-type: none"> ■ Added the command to use for Analytics Web server environment settings. ■ Added information about how to change the virtual Web server IP address in the web-apps.xml file. |
| “Configuring Siebel Analytics for Apache Tomcat Server (Stand-Alone on Windows)” on page 60 | Added procedures for configuring Tomcat Web application server for Windows. |
| “Starting and Shutting Down the Scheduler Process on UNIX” on page 85 | Added this section on UNIX commands used to start and stop Scheduler process. Moved most of the Scheduler material to Chapter 1 and inserted cross-references to the updated sections. |

Table 2. Changes Made in Version 7.5.3, Rev. A

| Topic | Revision |
|---|---|
| <p>Siebel Analytics Cluster Server:</p> <ul style="list-style-type: none"> ■ Overview ■ “About the Siebel Analytics Cluster Controller Setup” on page 124 ■ Cluster server requirements ■ “Other Installation Requirements for the Cluster Server Feature” on page 126 ■ Cluster configuration ports ■ “Parameter and Syntax Descriptions in the Siebel Analytics Configuration File Cluster Section” on page 170 | <ul style="list-style-type: none"> ■ Added information about the cluster feature, including a diagram showing a typical small cluster server setup. ■ Added configuration requirements for clustering to work properly. ■ Corrected the default port settings used. |
| <p>Repositories and data sources:</p> <ul style="list-style-type: none"> ■ “Using an Older Repository While Upgrading the Siebel Analytics Platform” on page 179 ■ “Stopping and Starting the Siebel Analytics Services When Importing a Repository” on page 192 ■ “Disabling the eFinance Logical Table Sources” on page 261 ■ “Setting the ORACLE_HOME Variable for Oracle 9i Clients” on page 87 ■ “Setting the Oracle Database for the Siebel Analytics Server Machine” on page 88 | <ul style="list-style-type: none"> ■ Added a pointer to a FAQ about integrating Siebel Analytics with a Siebel operational application if the versions of Siebel Analytics and the Siebel operational application do not match. ■ Added the order in which the services are stopped, then restarted. ■ Revised the procedure to update the Logical Table sources in the Siebel Analytics repository file before using any non-financial services Siebel Industry Application. ■ Because Siebel Analytics supports only 32-bit operations, added this procedure for Oracle 9i clients to specify 32-bit OCI libraries. ■ Added this section to make sure that the tnsnames.ora file references the correct DSN in the repository connection pool. |
| <p>“Troubleshooting the Siebel Analytics Installation on Windows” on page 69</p> | <p>Added procedures to troubleshoot the installation on Windows.</p> |

Table 2. Changes Made in Version 7.5.3, Rev. A

| Topic | Revision |
|---|--|
| “Troubleshooting the Siebel Analytics Installation on UNIX” on page 118 | Added procedures to troubleshoot errors sometimes encountered when logging on to Siebel Analytics Web. |
| Data Warehouse and archived forecasts “Performance” on page 256 | Added notes stating that only archived forecasts are sent to the data warehouse during the ETL process, which improves overall performance. |
| Localization: <ul style="list-style-type: none"> ■ “Changing Localization Variables in the Siebel Analytics Repository” on page 282 ■ “About the WEBLANGUAGE Session Variable” on page 282 ■ “Changing Configuration Settings for Japanese Localizations on AIX” on page 283 | <ul style="list-style-type: none"> ■ Added configuration steps for localizing variables in the Siebel Analytics repository. ■ Added a section describing how the language of the metadata in Answers (the Subject Area and column names) depends upon the initialization block LOCALE. ■ Added a section describing how to configure Japanese-language deployments running AIX. |

Version 7.5.3

Table 3. Changes Made in Version 7.5.3

| Topic | Revision |
|---|---|
| “Introduction” on page 11 | Removed this release-specific information: 7.5.2.210/.211 Maintenance Release requirement. |
| “To run the Siebel Analytics installer on Windows” on page 38 | <ul style="list-style-type: none"> ■ Revised for 7.5.3: In step 2b, the choices of data warehouse are now only Horizontal and Vertical. ■ Revised for 7.5.3: Changed text of Note about Bridges to reflect product changes. |

Table 3. Changes Made in Version 7.5.3

| Topic | Revision |
|---|--|
| “Installing the Charting Image Server” on page 43 | <ul style="list-style-type: none"> ■ Revised for 7.5.3: Changed description of installation to reflect installer product change. ■ Removed two steps that mentioned JVM versions. ■ Added note that the process in this section is now automated. |
| “Post-Installer Tasks” on page 47 | Renamed this section. It was previously named “Initializing the Installation.” |
| “Configuring IBM DB2 Connect for Queries on Siebel Analytics Server” on page 52 | Added this section. |
| “A Note on Executable Files” on page 54 | Rewrote the Caution to state the most important information first. |
| “Inserting Siebel Analytics Web License Keys” on page 56 | Added a sentence that the webcat folder is installed automatically. |
| “To add or change components” on page 58 | In step 3, corrected the alias name. |
| “Notes on Dashboard Access” on page 68 | Created a new heading from two parallel ones. Added background information clarifying the differences between integrated and stand-alone products. |
| “To install the Siebel Analytics Server software on UNIX” on page 76 | In step 5, added more detail about updating and verifying the registry. |
| “Siebel Analytics Scheduler Tables (Stand-Alone Only)” on page 84 | Rewrote this section. |
| “Database Tables and the Siebel Analytics Scheduler” on page 78 | Added mention of ODBC connections. |
| “Configuring IBM DB2 Connect for Queries on Siebel Analytics Server” on page 86 | Added section. |

Table 3. Changes Made in Version 7.5.3

| Topic | Revision |
|---|---|
| “Post-Installation Requirements for Solaris” on page 87 | <ul style="list-style-type: none"> ■ Added more information to procedure. ■ Added note about limited Solaris version support. |
| “Installing and Configuring Corda PopChart Image Server” on page 92 | Added paths for the template backup files. |
| “To install the PopChart Image Server” on page 92 | Added step 3, about changing the XML file. |
| “To create a new virtual server on Sun ONE” on page 100 | In step 2, added a note about the Server Name field. |
| “A Note on Executable Files” on page 115 | Rewrote the Caution to state the most important information first. |
| “Configuration Options for the Siebel Analytics Server” on page 116 | <ul style="list-style-type: none"> ■ Corrected file names. ■ Converted text to a procedure format. |
| “Troubleshooting the Siebel Analytics Installation on UNIX” on page 118 | Under the “Charts do not appear” symptom, added a fourth step regarding checking Web or application server name. |
| “SORT_ORDER_LOCALE on UNIX Operating Systems” on page 149 | Added General Section note to SORT_ORDER_LOCALE parameter about UNIX operating systems. |
| “Changing the Preconfigured Database Connections” on page 184 | Rewrote a sentence to say that <i>all</i> database connections must be reconfigured. |
| “Internationalization Considerations” | Revised for 7.5.3: Removed the section A Note on Windows 2000 Platforms for Analytics Web, because it mentioned a third-party product no longer used. |

Table 3. Changes Made in Version 7.5.3

| Topic | Revision |
|--|---|
| “A Note on Unicode Support” on page 281 | Rewrote material from A Note on Windows 2000 Platforms for Analytics Web into a new section, and put this section at the beginning of chapter. This note briefly warns customers of code page issues that have surfaced since the last version of Siebel Analytics. (Material to be covered in full in a Technical Note.) |
| “Adding Views for Custom Analytics Dashboards” on page 293 | Rewrote the procedure. |

Additional Changes

- Wherever possible, removed release-specific and platform-specific information. Where release version or platform makes a difference, changed references to more generic ones, with reference to *System Requirements and Supported Platforms for Siebel Analytics* on Siebel SupportWeb and *System Requirements and Supported Platforms* on Siebel SupportWeb.

Version 7.5, Rev. C

Table 4. Changes Made in Version 7.5 Rev. C

| Topic | Revision |
|--|--|
| 7.5.2.210/.211 Maintenance Release requirement | Updated a note to the Introduction stating that this guide assumes that you are using the 7.5.2.210 or 7.5.2.211 maintenance release. |
| “A Note on Executable Files” on page 54 | Added a section on executable command-line utilities to the Windows and the UNIX installation chapters. |
| Siebel eBusiness 6.3 to 7.5 Analytics Bridge | Added a note to the installer procedure regarding a new choice, to install the Analytics Bridge. This choice does not appear in the Prerequisite Check screen. |
| “Charting Image Server Installation and Configuration for Windows” | Added the procedure. |

Table 4. Changes Made in Version 7.5 Rev. C

| Topic | Revision |
|---|--|
| “To uninstall an existing installation of Siebel Analytics software” | Added a note regarding the proper way to uninstall the charting image server files. |
| “Configuring Microsoft Internet Information Server (IIS) for Siebel Analytics” | Removed part of procedure and changed to a cross-reference to Third-Party documentation. |
| “Post-Installation Requirements for HP-UX” | Corrected pathname in code samples given. |
| “Post-Installation Requirements for Solaris” | Corrected pathname in code samples given. |
| NQSConfig.INI File parameters: “LOCALE” on page 145 “SORT_ORDER_LOCALE” on page 147 | Added a list of the settings for these parameters. |

Version 7.5, Rev. B**Table 5. Changes Made in Version 7.5 Rev. B**

| Topic | Revision |
|---|---|
| 7.5.2.200 Maintenance Release requirement | Added a note to the Introduction stating that this guide assumes that you are using the 7.5.2.200 maintenance release. |
| New Siebel Analytics Installation Wizard | <p>Added a note to the Introduction about uninstalling the current version of Siebel Analytics before installing a new version.</p> <p>Added a note to Chapter 2, “Installing Siebel Analytics Software in the UNIX Environment” that explains the Siebel Analytics Installation Wizard runs only on Windows systems.</p> |

Table 5. Changes Made in Version 7.5 Rev. B

| Topic | Revision |
|--|---|
| Installation options | Rewrote “Process of Installing Siebel Analytics on Separate Machines on Windows” to reflect new installation program, such as the Database Type, Data Warehouse Type selections, and ePharma 6.3 to 7.5 ETL Bridge, in the Prerequisite Check screen. |
| | Added a summary, “Installation Options” on page 16, to the Introduction, to clarify which sections pertain to the different types of installation. |
| Siebel ePharma 6.3 to 7.5 Analytics Bridge. | Added a note to the installer procedure, Step 2 on page 38 , regarding a new choice, to install the Analytics Bridge. |
| Microsoft Internet Information Server (IIS) | Restored procedure “Installing and Configuring Microsoft Internet Information Server (IIS) 4.0.” |
| Third-party product name change: Sun iPlanet is now Sun ONE Server | “Installing on Sun ONE Web Server on Solaris” on page 99. |
| Installation of WebSphere | Added the section, “Installing Siebel Analytics Web on WebSphere” on page 103. |
| Configuration tasks for Analytics applications | Added an overview of configuration tasks to Chapter 7 , “Accessing Analytics Through Siebel Applications.” |

Version 7.5.2.101

Table 6. Changes for Version 7.5.2.101

| Topic | Revision |
|---------------------------------------|--|
| General platform-specific information | Most information about supported platforms was removed to <i>System Requirements and Supported Platforms</i> on Siebel SupportWeb. However, where platform variations influence the configuration process, this information was retained, clarified, or added (see below). |
| HP-UX configuration requirements | Added “Post-Installation Requirements for HP-UX” on page 90. |

Table 6. Changes for Version 7.5.2.101

| Topic | Revision |
|--|--|
| Solaris configuration requirements | Added “Post-Installation Requirements for Solaris” on page 87. |
| IBM AIX configuration requirements | Made changes to “Post-Installation Requirements for IBM AIX” on page 88. |
| Scheduler | Moved Scheduler information formerly in Readme file to “Siebel Analytics Scheduler Tables (Stand-Alone Only)” on page 84 and “Database Tables and the Siebel Analytics Scheduler” on page 78. |
| Pop Chart Image Server | Added details to installation of the Pop Chart Server (“PopChart Image Server (PCIS)” on page 91). |
| UNIX installation and configuration requirements | Added or changed many small commands or configuration procedures to clarify or correct the overall installation of Siebel Analytics on UNIX platforms (Chapter 2, “Installing Siebel Analytics Software in the UNIX Environment”). |
| Added step | Added step about checking the odbc.ini and userodbc.reg files in “To install the Siebel Analytics Server software on UNIX” on page 76. |
| Siebel Analytics DSN entries | Added detail to “To update the default DSN values” on page 185. |
| Authentication | Added information about ADSI authentication (“Configuring ADSI Authentication” on page 206). |
| “Siebel Analytics Stand-Alone Dashboard Access” on page 69 | Added a configuration task for Siebel Analytics Stand-Alone. |
| Parameter information in Chapter 4, “NQSConfig.INI File Reference” | Updated LOCALE parameter information. |
| | Specified that the SORT_TYPE parameter must be set to BINARY. |
| | Specified that the PROJECT_INACCESSIBLE_COLUMN_AS_NULL parameter must be set to TRUE. |

Introduction

Revision History

Installing Siebel Analytics Software in the Windows Environment

1

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

NOTE: Chapter 2, “Installing Siebel Analytics Software in the UNIX Environment” details instructions for installing the software in the UNIX environment. However, the Siebel Analytics Installation Wizard, described here, runs only on Windows systems. The third-party Informatica installer is available for Windows only.

This chapter contains the following topics:

- [“Additional Requirements for Installing on Windows” on page 32](#)
- [“Installing Siebel Analytics” on page 34](#)
- [“Post-Installer Tasks” on page 47](#)
- [“Configuring Microsoft Internet Information Server \(IIS\) for Siebel Analytics” on page 57](#)
- [“Configuring Siebel Analytics for Apache Tomcat Server \(Stand-Alone on Windows\)” on page 60](#)
- [“Siebel Analytics Scheduler Tables \(Stand-Alone Only\)” on page 62](#)
- [“Changing the Account Under Which a Windows Service Runs” on page 67](#)

- [“Notes on Dashboard Access” on page 68](#)
- [“Troubleshooting the Siebel Analytics Installation on Windows” on page 69](#)

CAUTION: Siebel Analytics 7.5.3.140 does not support Windows XP Service Pack 2 or later service packs. For other hardware and software requirements for the Siebel Analytics software and for clients connecting to Siebel Analytics, see *System Requirements and Supported Platforms for Siebel Analytics* on Siebel SupportWeb.

Additional Requirements for Installing on Windows

This section lists additional requirements for the Siebel Analytics software on Windows. The topics are:

- [“Required Security Settings in Windows for Siebel Analytics Web” on page 32](#)
- [“Upgrade Note On Siebel Analytics Server Client/Server Communication” on page 33](#)

Required Security Settings in Windows for Siebel Analytics Web

On Windows platforms, the directory in which Siebel Analytics is installed and the location chosen for the Siebel Analytics temporary data directory both need to have the permission settings set to Change/Full Control for the Microsoft Internet Information Service (IIS) domain user account that Siebel Analytics Web is to run on. This is generally the default user IUSR_*machinename*. You can verify these settings, and change them if required, from the Security tab on the Windows Properties dialog. You can access this dialog from Windows Explorer by right-clicking on the directory, for example, C:\SiebelAnalytics or C:\Program Files\SiebelAnalytics or C:\SiebelAnalyticsData, and choosing Properties. Click the Security tab to see the settings and make any required changes.

For other security settings, see [Chapter 8, “Applications User Authentication and Security Setup.”](#)

Upgrade Note On Siebel Analytics Server Client/Server Communication

The default Siebel Analytics Server client/server communication method is TCP/IP; previously, it was DCOM. To support this change in method, the following changes have been made:

- In the Analytics ODBC Wizard's Enter Logon Information screen, a Port field has been added.
- In the NQSConfig.INI file, two parameters have been added to the Server section.

For information about the new parameters in the configuration file, see [“CLIENT_MGMT_THREADS_MAX” on page 159](#) and [“RPC_SERVICE_OR_PORT” on page 159](#).

- With the change to TCP/IP, the Siebel Analytics Server service needs to be started before you use the Siebel Analytics Administration Tool to open a repository in online mode. Opening a repository in online mode does not cause the service to start automatically.
- If you are already running Siebel Analytics Server but are continuing to use DCOM, leave the Port field in the ODBC Wizard set to the default value of 9703, and define a Windows system environment variable named NQUIRE_DCOM to force the usage of DCOM. Set the variable value to 1.

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

Installing Siebel Analytics

This section explains how to install the Siebel Analytics software.

NOTE: If you are reinstalling or installing a new version of Siebel Analytics, you must first uninstall the software. Make backups of the Web Catalog, repository (.rpd) nQSConfig.INI, and nQClusterConfig.INI files and move them to a temporary location.

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

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

- 1 [“Installing the Microsoft Data Access Components \(MDAC\)” on page 35.](#)
- 2 [“Uninstalling or Upgrading Siebel Analytics Software” on page 36.](#)
- 3 Locating the installation software (on CD, DVD or network).
- 4 [“Running the Siebel Analytics Installer Under Windows” on page 38.](#)
- 5 Responding to installer wizard prompts for Siebel Analytics and for Siebel Data Warehouse.
- 6 [“Inserting Siebel Analytics Web License Keys” on page 56.](#)
- 7 Rebooting the computer.

NOTE: If you plan to install the Siebel Analytics Cluster Server feature, you should first read [Chapter 3, “Installing the Siebel Analytics Cluster Server Feature.”](#)

Differences between the installation programs for Stand-Alone Siebel Analytics and Integrated Siebel Analytics are summarized in [“Installation Options” on page 16.](#)

Installing the Microsoft Data Access Components (MDAC)

If you are going to install any Siebel Analytics components (Siebel Analytics Administration, Siebel Analytics Scheduler, or Siebel Analytics Server), Microsoft Data Access Components (MDAC) 2.5 must also 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.

Follow the steps below 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.

To install the Microsoft Data Access Components

- 1** If you are installing on Windows 2000, the appropriate version of MDAC is already installed. Continue with [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment.”](#)
- 2** If you are installing on Windows NT, search for the files msdadc.dll and (optionally) oledb32.dll. These files are generally located in the C:\Program Files\Common Files\System\OLE DB folder.
- 3** If 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 2.50 or newer, you need to install MDAC.
- 4** Either insert the Siebel Analytics installation media into the CD-ROM drive or access the network location that contains the Siebel Analytics installation files. Locate the MDAC25 folder in the \NT\ folder, and then run the program mdac_typ.exe. This starts the MDAC installer.

NOTE: If the MDAC25 folder is not available, you can download the MDAC installer from the Microsoft Web site (<http://www.microsoft.com>).

- 5** Follow the prompts to complete the MDAC installation. When you are finished, continue with [“Uninstalling or Upgrading Siebel Analytics Software” on page 36.](#)

Uninstalling or Upgrading Siebel Analytics Software

- If you are installing Siebel Analytics for the first time, do the following:
 - Start with “[Running the Siebel Analytics Installer Under Windows](#)” on [page 38](#).
- If you are reinstalling Siebel Analytics, or installing a newer version, you must uninstall the current version first.
 - Make backups of the Web Catalog, repository (.rpd), nQSConfig.INI, and nQClusterConfig.INI files and move them to a temporary location. Removing or updating an existing installation automatically clears all query cache files.
 - Uninstall the current version, as described in the following procedure.
 - If you are upgrading from earlier versions of the former nQuire Suite software, the newer version does not start using the version’s configuration file. It is recommended that you either migrate any changes from your existing file to the new NQSConfig.INI file, or add the new and changed parameters to your existing file.

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.

To uninstall an existing installation of Siebel Analytics software

- 1 Stop the following services (from Start > Settings > Control Panel > Services):
 - Siebel Analytics Server
 - Siebel Analytics Scheduler
 - Siebel Analytics Cluster Server
 - IIS Admin Service (Microsoft Internet Information Server), and any additional services it stops
 - World Wide Web Publishing Service

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

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

- *Yes* keeps the existing .rpd files (repository) and .ini files (configuration) and appends the extension *.old* to them.
- *No* causes the existing files to be replaced.

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

Running the Siebel Analytics Installer Under Windows

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

NOTE: Siebel Analytics installation now includes installation of the Siebel Data Warehouse (formerly a separate installation). If you are installing Stand-Alone Siebel Analytics, skip the installer steps following the section “[Installing the Charting Image Server](#).” For more information on data warehouse installation options, refer to *Siebel Data Warehouse Installation and Administration Guide*.

To run the Siebel Analytics installer on Windows

- 1** Access the installation files by either inserting the installation media into the CD-ROM or DVD drive or navigating to the network location that contains the installation files, and run the program setup.exe.

(On some versions of Windows, an Installshield message screen may appear stating that an older version of the Windows Installer is being used. Ignore this message. Close the message window and proceed with the installation.)

The installation wizard prompts you through each screen. Click Next to continue to the next screen.

NOTE: Determine the values for the installation options before beginning the installation.

- 2** Prerequisite Check screen: Check one or more choices as appropriate.
 - a** Database client type:
 - (For Siebel Analytics operational applications installation only.) If you are using MS SQL Server for your transactional database or data warehouse, the installer proceeds to the DSN Configuration screen. Set up the Data Source Names (DSNs) using the Microsoft ODBC Driver Manager. (The actual configuration is done after all the files have been copied. Choose the database connectivity client from the choices given.)

- For other databases, you are not prompted for DSN configuration. However, you should set up the DSNs appropriately later. For example, for IBM DB2, use the DB2 Client Configuration Assistant to set up the database connectivity and DSNs.
- b** If you are installing a data warehouse, specify which one:
 - Horizontal (Siebel eBusiness Applications)
 - Vertical (Siebel Industry Applications)

NOTE: If you are using a Siebel eBusiness application version 6.3 or 7.0.4, and have also licensed version 7.5 of Siebel Analytics, you need to install and use the appropriate Siebel Analytics Bridge. Installation of the Analytics Bridge allows you to use the newer functionality of Siebel Analytics 7.5 with a Siebel eBusiness 6.3 or 7.0.4 application. Although the Siebel Analytics Bridge option is not listed in the Prerequisite Check screen, you may still install this Bridge. For information about the Siebel Analytics Bridges, see the Appendices of *Siebel Data Warehouse Installation and Administration Guide*.

- 3** At the Destination Folder screen, select the destination location for the Siebel Analytics installation.
 - To change the default location, such as D:\SiebelAnalytics, click Change.
 - Make sure the location has the appropriate permissions set. (Refer to [“Required Security Settings in Windows for Siebel Analytics Web”](#) on page 32.)
 - Click Next to continue.
- 4** Setup Type screen: Select the type of setup you want to perform.

NOTE: The Client utility allows you to issue SQL to Siebel Analytics Server. It is a troubleshooting tool normally used only by database administrators and Siebel personnel.

5 Cache Configuration screen (Siebel Analytics Applications installation only).

When you install Analytics Applications, the caching option is turned on by default in the NQSConfig.INI file to provide better performance. For more information on caching and NQSConfig.INI parameters, refer to *Siebel Analytics Server Administration Guide*. Choose the cache file size depending on your data in the Siebel Data Warehouse and Siebel transactional database, as well as the load on the system.

6 Language Selection screen: select the locale for the server from the drop-down list. This sets the language in which error and informational messages are displayed. The default is English (US). This option is not active for Web-only installs.

If the Language Selection screen displays the option “Check here if the dashboard is to be viewed in Japanese,” ignore the option.

NOTE: This setting is *not* related to the LOCALE parameter in the General section of the NQSConfig.INI file, which specifies the locale in which data, rather than error and informational messages, is returned from the server. If you want to select a locale for data other than the default, english-usa, you need to explicitly set the value of this parameter in the configuration file. For more information, see [Chapter 4, “NQSConfig.INI File Reference.”](#)

7 COM Service Type screen (stand-alone and applications installation): Select how the Analytics Server and Analytics Scheduler services start. The choices are Automatic (when the machine boots up) or Manual.

If you select the Automatic startup option, the Scheduler does not start automatically unless the Scheduler’s back-end database is both configured and available. Also, if you set it to start the service automatically, the machine boot-up time increases noticeably. Depending on your organization’s needs, the Manual startup option may be the preferred choice.

8 Logon Service screen: If you selected the Server or Complete option, or are installing the Siebel Analytics Cluster Server feature (from the Siebel Analytics Cluster selection on the Custom Setup screen), specify the account name and password of an existing account that the Siebel Analytics software is to run on.

- a** If the Siebel Analytics Server does not participate in a cluster, this name and password should be that of the LocalSystem account (default).
- b** If this machine is hosting either a Cluster Controller or a Siebel Analytics Server that participates in a Cluster, specify a Domain account under which all clustered Siebel Analytics Servers and Cluster Controllers run.

This account must be a member of the local Windows Administrators group on each machine in the cluster, and must have the Logon as a service right explicitly assigned to it. Specify it in the format domain\account, such as siebel\user1. Do not use the LocalSystem account.

For more information, including the procedure to assign the Logon as a service right, see [“Process of Installing the Clustering Feature”](#) on page 126.

- 9** Temporary Folders screen: Select locations for Siebel Analytics temporary data and file storage, and click Next to continue.
 - The default location for temporary data storage is C:\SiebelAnalyticsData.
 - The default location for temporary file storage is C:\SiebelAnalyticsData\Temp.
 - Make sure the location has the appropriate permissions set (see [“Required Security Settings in Windows for Siebel Analytics Web”](#) on page 32).

- Click the appropriate Change button to select a different location, such as D:\SiebelAnalytics.

If you select a different location for the temporary data storage folder, the default location for temporary files is automatically changed to reflect the new path.

NOTE: The temporary data storage location is used by Siebel Analytics Web for Web Catalogs, Chart cache, and other data. The temporary files storage location is used by Siebel Analytics Server and Siebel Analytics Scheduler. It is recommended that you specify a directory with at least 510 MB free space for temporary file storage that is used only by Siebel Analytics Server and Siebel Analytics Scheduler (Siebel Analytics Server requires approximately 500 MB free space, while Siebel Analytics Scheduler requires 5–10 MB free space.) If your data volume is high or you have large numbers of users on the system, more temporary space is required.

- 10** Mail Server screen: If you are installing the Siebel Analytics Scheduler component, the iBots feature is also installed. Enter the name of a mail server to which iBots can connect, such as *mail.myCompany.com*. (You can also enter the IP address of the mail server, rather than the name, if you prefer.) The SMTP port number defaults to 25. If the selected mail server uses a different SMTP port number, make the appropriate change.
- 11** Scheduler Server screen: If you are installing the Siebel Delivers component, enter the name of the server on which the Siebel Analytics Scheduler is running. Siebel Analytics Scheduler is part of the Siebel Analytics Server installation. Leave this name blank if the Scheduler is running on the same machine as the Web server.

NOTE: Siebel Analytics Intelligence Dashboards, Siebel Answers, and Siebel Delivers require Microsoft Internet Explorer Version 5.0 or newer. Siebel Analytics Scheduler requires Microsoft Internet Explorer Version 5.5 or newer.

- 12** The Wizard is set to begin installing Siebel Analytics. To review or change any of your installation settings, click Back. To continue with installation, click Install.

NOTE: If the installation process detects that you are attempting to install Siebel Analytics Web or Siebel Analytics Scheduler on a system running an older version of Microsoft Internet Explorer, you are directed to upgrade to the latest version of Microsoft Internet Explorer.

The status meter reflects installation progress. The installation process may take several minutes.

Installing the Charting Image Server

When installation Step 12 is done, the charting image server installation screens appear. In the Information screen, click OK. In the Introduction screen, click Next to continue or Exit to end the installation.

NOTE: If you choose to abort this part of the installation now, or to reinstall the image server, refer to [“Charting Image Server Installation and Configuration for Windows” on page 55](#) to guide you.

To install the image server on Windows (using the Installer Wizard)

- 1** The installer prompts you to select the following:
 - The License Agreement. Choose Yes and click Next.
 - Release Notes. Click Next.
 - Choose Installation Folder. Accept the default path or change it. Click Next.
 - Choose Shortcut Location. Accept the default path or change it. Click Next.

- Choose Java Virtual Machine. If more than one appears in the window, choose one or search for another. Click Next.

NOTE: JavaSoft JDK/JRE version 1.3.1 or greater is required; JDK version 1.3.1 is recommended. Refer to PCIS documentation for details.

- In the Choose Install Set window, select the Production Server option, and click Install.

The Installer Wizard configures the charting image server.

- 2** The Installation Complete screen appears. Click Done.

Installing the Siebel Data Warehouse

When the charting image server installation is done, the Siebel Analytics Siebel Data Warehouse installation screens appear:

- These screens help you set up or remove Informatica or repository tables.
- Installing the Siebel Data Warehouse is detailed in *Siebel Data Warehouse Installation and Administration Guide*.

NOTE: The Siebel Data Warehouse is also referred to as the Siebel Relationship Management Warehouse (RMW).

Checking the Installation Log Files

When the Installation Wizard is finished, check the log file and change the system variables as necessary.

To check the log files

- 1 Open `$INSTALL_DIR\Log\AnalyticsInstall.log`.

This is a very large file that contains all the events of the installation.

- 2 If you have installed Siebel Data Warehouse, open `$INSTALL_DIR\DW\dwdb.log`.

This file shows the number of tables installed in the Siebel Data Warehouse.

- 3 Click Finish to close the window.

Choosing Your Siebel Analytics Repository

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

The default Stand-Alone Analytics repository (for Windows) is `demo1.rpd`.

Post-Installer Tasks

There are a number of tasks necessary to complete after the Siebel Analytics Installation Wizard is finished. This section covers the following tasks:

- [“Initializing the Installation” on page 47](#)
- [“Process of Installing Siebel Analytics on Separate Machines on Windows” on page 48](#)
 - [“Installing Siebel Analytics on a Windows Web Server Machine” on page 48](#)
 - [“Installing Siebel Analytics on a Windows Siebel Analytics Server Machine” on page 49](#)
 - [“Configuring Oracle Databases for the Siebel Analytics Server Machine” on page 49](#)
 - [“About Updating Row Counts in Native Databases” on page 51](#)
 - [“Changing the Siebel Analytics Default ASP Page” on page 52](#)
- [“Configuring IBM DB2 Connect for Queries on Siebel Analytics Server” on page 52](#)
- [“Inserting Siebel Analytics Web License Keys” on page 56](#)
- [“Charting Image Server Installation and Configuration for Windows” on page 55](#)
- [“Configuring Microsoft Internet Information Server \(IIS\) for Siebel Analytics” on page 57](#)

Initializing the Installation

After the Installation Wizard has finished running, you must perform several tasks for the installation to take effect.

- 1** Insert your license keys for any Siebel Analytics Web components you installed. See [“Inserting Siebel Analytics Web License Keys” on page 56](#).
- 2** Restart your computer before using the Siebel Analytics software. The installation prompts you to restart the computer now, or at a later time. Select your preference and click OK.

- 3 Install and Configure Microsoft Internet Information Server.

Process of Installing Siebel Analytics on Separate Machines on Windows

Use the following procedures to install Siebel Analytics Web server and Siebel Analytics Server on separate machines:

- [“Installing Siebel Analytics on a Windows Web Server Machine” on page 48](#)
- [“Installing Siebel Analytics on a Windows Siebel Analytics Server Machine” on page 49](#)
- [“Configuring Oracle Databases for the Siebel Analytics Server Machine” on page 49](#)

NOTE: Some steps that are completed automatically when installing on a single machine, such as creating a DSN, must be done manually for two separate machines.

Installing Siebel Analytics on a Windows Web Server Machine

This task is part of the [“Process of Installing Siebel Analytics on Separate Machines on Windows.”](#)

To install Siebel Analytics on a Web server machine on Windows

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

This installs the ODBC driver, ODBC Client, Answers, and Delivers files.

- 2 Create a system DSN called Analytics Web.

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

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

Proceed to [“Installing Siebel Analytics on a Windows Siebel Analytics Server Machine”](#) on page 49.

Installing Siebel Analytics on a Windows Siebel Analytics Server Machine

This task is part of the [“Process of Installing Siebel Analytics on Separate Machines on Windows”](#) and continues the installation of Siebel Analytics Web server and Siebel Analytics Server on separate machines, begun in [“Installing Siebel Analytics on a Windows Web Server Machine”](#) on page 48.

To install Siebel Analytics on a Siebel Analytics Server machine on Windows

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

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

- 2 Make sure that the correct Repository file and the data sources to connect to the physical DBMS is on the Siebel Analytics Server machine.
- 3 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 [“Process of Installing Siebel Analytics on Separate Machines on Windows.”](#) It applies only if the native database you are running is Oracle.

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, make sure the entry name matches the Siebel Analytics repository Data Source Names defined in the connection pools for all 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)
    )
  )
```

Confirming That Connection Pool Settings Refer to the Oracle Database

This task is part of the [“Process of Installing Siebel Analytics on Separate Machines on Windows.”](#) It applies only if the native database you are running is Oracle.

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, expand the appropriate database cylinder icon.
- 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:
 - The name matches the Siebel Analytics repository's connection pool settings for the Data Source Name.
 - The name specifies the targeted Oracle physical database.

About Updating Row Counts in Native Databases

This section applies if you are running a heterogeneous environment, such as Siebel Analytics Server and database on 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. This means that on the Windows machine running Server Administration Tool, an Oracle or DB2 data source must be configured to 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 this requirement is not completed—and if the server and client data sources are pointing at different databases—then erroneous updated row counts or incorrect results appear.

Changing the Siebel Analytics Default ASP Page

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

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

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

To change the Siebel Analytics default ASP page

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

Configuring IBM DB2 Connect for Queries on Siebel Analytics Server

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

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

To configure the **INTERRUPT_ENABLED** parameter

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

```
uncatalog dcs db local_dcsname

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

where:

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

Example using OS390 DB2 instance:

```
uncatalog dcs db DB2_390

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

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

A Note on Executable Files

The \$INSTALLDIR\SiebelAnalytics\Bin folder contains all of the executable files invoked by Siebel Analytics Server components, as well as some utilities that are described in *Siebel Analytics Server Administration Guide*. It also contains some command-line utilities that are provided for debugging purposes. For example, nQcmd.exe can be used for automated regression testing, nQUDMLGen.exe can generate UDML text from a repository, and nQUDMLExec.exe can generate a repository from UDML text and remove inconsistent or faulty UDML in the process.

CAUTION: It is recommended that you contact Siebel Technical Support before using any of the utilities listed below. Some can create damage if not used properly. For example, nQUDMLGen.exe may completely decompile and recompile the Analytics repository. The repository may be rendered unstable, unusable, or inconsistent.

The following command-line utilities are included:

- nQcmd.exe
- nQQueryStatsFormatter.exe
- NQSChangePassword.exe
- nQScheduler.exe
- nQSComGateway.exe
- nQSDBGatewayServer.exe
- nQSecUDMLGen.exe
- nQSServer.exe
- nQUDMLCli.exe
- nQUDMLExec.exe
- nQUDMLGen.exe
- SchConfig.exe
- SchShutdown.exe

Charting Image Server Installation and Configuration for Windows

Siebel Analytics uses a third-party charting image server to determine the look and feel of generated images on Siebel Analytics Web.

NOTE: The charting image server installation is integrated into the Analytics Installation Wizard.

This section describes what happens during the installation of PopChart Image Server (PCIS) on Windows.

Installation Considerations

- The image server runs as a separate server. If you configure it to run on a port other than the default port (81), you must reconfigure Analytics Web to point to the new location.
- It is possible for Analytics Web and the image server to run on separate machines, but for administrative as well as performance reasons, it is recommended that they be installed on the same machine.

- The registry value is

```
HKEY_LOCAL_MACHINE\SOFTWARE\Siebel Systems, Inc.\Siebel Analytics\Web\7.5\Charts\POP\ServerPrefix
```

- Set this registry value to the root URL for the image server.
- Create the POP registry key under the Charts key.
- Create a new string value called ServerPrefix. The ServerPrefix value is generally of the form:

```
http://machinename:port/?
```

NOTE: The trailing `/?` is necessary and must be included.

- Before beginning the image server installation, do the following:
 - Decide on a directory where you want to install the binaries for the image server.
 - Decide on a port number that you want the image server to listen on.
 - Stop the Analytics Web service.

Inserting Siebel Analytics Web License Keys

Siebel Systems provides a license key file, `AnalyticsWebLicense.xml`, and license keys for the Siebel Analytics Web components you have licensed. (The `SiebelAnalytics.webcat` is installed automatically into the `SiebelAnalyticsData\Web\Catalog\` folder when you install an integrated version.) When you have completed the installation, you need to edit this file to insert your license keys and save the file in the `\Web\Config` folder in the data folder on machines running Siebel Analytics Web components. The default name of the data folder is `SiebelAnalyticsData`.

To insert your license keys

- 1 Using a text editor, open the `AnalyticsWebLicense.xml` file.

A portion of the license key file is shown as follows.

```
<WebMessage name="kmsgLicenseCustomer" CRC="Enter Customer
license key here">
  <TEXT>Enter Customer Identifier here</TEXT>
</WebMessage>
<WebMessage name="kmsgLicenseAnswers" CRC="Enter Answers
license key here"> <TEXT>Enter Customer Identifier here</
TEXT>
</WebMessage>
<WebMessage name="kmsgLicenseDashboards" CRC="Enter
Intelligence Dashboards license key here">
  <TEXT>Enter Customer Identifier here</TEXT>
</WebMessage>
<WebMessage name="kmsgLicenseDelivers" CRC="Enter Delivers
license key here">
  <TEXT>Enter Customer Identifier here</TEXT>
</WebMessage>
<WebMessage name="kmsgLicenseDevices" CRC="Enter Alternative
```



```
Devices license key here">  
<TEXT>Enter Customer Identifier here</TEXT>  
</WebMessage>
```

- 2 Enter your supplied customer identifier, customer license key, and Siebel Analytics Web component keys where indicated:
 - Enter your Customer Identifier for each component you have licensed.
 - Do not delete the double quote marks (").
 - Do not make changes to the license key entries for components you have not licensed.

A sample license key entry for the Siebel Delivers component is shown below.

```
<WebMessage  
name="kmsgLicenseDelivers"CRC="14741b31382fadaba3022f0ef340b7  
29beb8"> <TEXT>MyCompany</TEXT>  
</WebMessage>
```

- 3 Save the file back into the \Web\Config folder in the data folder. The default name of the data folder is SiebelAnalyticsData. For example, if you install the software into C:\SiebelAnalytics, the location to save the file back into is C:\SiebelAnalyticsData\Web\Config.
- 4 Perform this procedure on each machine running Siebel Analytics Web components.

Configuring Microsoft Internet Information Server (IIS) for Siebel Analytics

Should you be required to change the settings for IIS for your Siebel Analytics installation, perform the procedure in this section. If not, skip this section.

NOTE: Microsoft Internet Information Server must be installed before installing Siebel Analytics. 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 components

- 1 Start Internet Services Manager.

NOTE: Steps 2 and 3 are not necessary if the virtual directory was created during the installation.

- 2 From the Microsoft Management Console, select the Default Web Site icon. Right-click and choose New > Virtual Directory.
- 3 In the New Virtual Directory Wizard, enter *analytics* as the name for the alias to be used to access the Siebel Answers application, and then click Next.
- 4 Use the Browse button to navigate to the directory in which the Siebel Analytics Web components are installed.

This is typically in %INSTALLDIR\Web\App.]

- 5 Select the following options, then click Finish:
 - Allow Read Access
 - Allow Script Access
 - Allow Execute Access
- 6 Select the newly created Siebel Analytics Web script icon, right-click, and choose Properties.
- 7 On the Virtual Directory tab, select the option Run in separate memory space (isolated process).
- 8 On the Directory Security tab, click Edit in the Anonymous Access and Authentication Control area. This opens the Authentication Methods dialog.
- 9 Make sure these options are *not* selected:
 - Windows NT Challenge/Response (IIS 4.0)

- Integrated Windows Authentication (IIS 5.0)

NOTE: These options must be un-selected so that the Siebel Analytics Web process always runs under the NT account specified under the “Allow anonymous access” option described in [Step 10](#).

- 10** Select the option Allow Anonymous Access and click Edit. This opens the Anonymous User Account dialog.
- 11** Click Browse and select a Windows NT domain user that has access to the network and click OK.

In most cases, the default user IUSR_ *machinename* is sufficient, but you may need to enter a domain account with more network privileges. This account needs full access to both the Siebel Analytics installation directory and the Siebel Analytics temporary data directory, as described in the section “[Required Security Settings in Windows for Siebel Analytics Web](#)” on page 32.

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

- 12** Set the password.
 - If you have IIS 4.0, type the password for the user, confirm, and click OK.
 - If you have IIS 5.0, select the option Allow IIS to control password and click OK.
- 13** Click OK successively until you exit to the Microsoft Management Console, and then close the console.

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

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

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

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

NOTE: The software for running Apache Tomcat on Windows is available over the Internet. Check *System Requirements and Supported Platforms* on Siebel SupportWeb for necessary versions of the software. See [“About Installing Apache Tomcat Server on Windows”](#) on page 60.

- Install and configure Siebel Analytics on the Tomcat Web server.

See [“Configuring the Apache Tomcat Web Server for Siebel Analytics Stand-Alone on Windows”](#) on page 61.

- Test the Tomcat Web server installation.

See [“Testing the Tomcat Web Server Installation on Windows”](#) on page 62.

About Installing Apache Tomcat Server on Windows

This section is part of [“Configuring Siebel Analytics for Apache Tomcat Server \(Stand-Alone on Windows\).”](#)

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 World Wide Web Publishing Service is running.

If it is, stop it and set the startup type to Manual.

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

D:\apache\httpd

Do this so that the MS-DOS path name is 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 instance:

D:\apache\tomcat

- Make sure the Apache Tomcat service is running.

Configuring the Apache Tomcat Web Server for Siebel Analytics Stand-Alone on Windows

This section is part of “[Configuring Siebel Analytics for Apache Tomcat Server \(Stand-Alone on Windows\)](#).”

NOTE: Stop the Apache Tomcat service before configuring the Web server.

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

- 1 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 on. A default installation of Tomcat has a single <Host> tag for the default host.

- 2 Modify the contents of this tag as follows:

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

- 3 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 on Windows

This section is part of [“Configuring Siebel Analytics for Apache Tomcat Server \(Stand-Alone on Windows\).”](#)

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.

Siebel Analytics Scheduler Tables (Stand-Alone Only)

This section applies only if you are running Siebel Analytics Stand-Alone and are using Siebel Analytics Scheduler.

NOTE: If you are not using Siebel Analytics Scheduler, you do not need the information in this section. If you have pointed the Siebel Analytics Server to the Siebel transactional database, you do not need to create Siebel Analytics tables. If you are upgrading from any version prior to version 7.5, contact Siebel Technical Support for assistance.

About Configuring Analytics Scheduler

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

When the Scheduler is successfully running, change the service to be an automatic startup.

NOTE: The Scheduler tables are required for Siebel iBots. If you are migrating a Siebel Analytics environment to a new system—for example, moving from development to production—make sure you also migrate the Siebel Analytics Server repository file and the Scheduler tables.

For further information, see *Siebel Analytics Scheduler Guide* and *Siebel Analytics Web Administration Guide*.

About Analytics Scheduler Tables

Siebel Analytics Server contains Siebel Analytics tables. The first is used by the Siebel Analytics Server; the remaining four are used by Siebel Analytics Scheduler. [Table 7](#) gives brief descriptions of the database tables used by Siebel Analytics Scheduler. The Siebel Analytics Scheduler requires a back-end database table to store information regarding the instances of the scheduled jobs:

- You can either create a new database to store the tables or use an existing one.
- After you have created a database, create the Scheduler tables by executing SAJOBS.xxx.sql (where xxx is the database type). See [“Creating Database Tables for Siebel Analytics Scheduler” on page 65](#).

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

Table 7. 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 back-end database. The S_NQ_ACCT table stores all the information regarding Accounting Data. For information about usage tracking, see <i>Siebel Analytics Server Administration Guide</i> . |
| S_NQ_JOB | Stores information regarding the scheduled jobs. |
| S_NQ_INSTANCE | Stores information pertaining to job instances. |
| S_NQ_ERR_MSG | Stores error messages for Siebel Analytics Scheduler job instances that do not complete successfully. |
| S_NQ_JOB_PARAM | Stores information about Siebel Analytics Scheduler job parameters for scheduled jobs. |

Changing Scheduler Table Names

If you are not using Siebel Analytics Scheduler, you do not need the information in this section.

You can change the names of the tables that Scheduler uses by adding settings to the Windows registry, as shown in the following example. (A new key, DB Column Names, has been created.)

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Siebel Systems, Inc.\Siebel Analytics\Scheduler\7.5\DB Column Names]
```

| Name | Type | Data |
|-----------------|--------|---------------|
| TABLE_JOBS | REG_SA | S_NQ_JOB |
| TABLE_INSTANCES | REG_SA | S_NQ_INSTANCE |

| Name | Type | Data |
|--------------|-------------|----------------|
| TABLE_PARAMS | REG_SA | S_NQ_JOB_PARAM |
| TABLE_ERRMSG | REG_SA | S_NQ_ERR_MSG |

The values that you create in the data string become the values used for Scheduler table names.

NOTE: Changing these registry values requires a restart of Scheduler.

Creating Database Tables for Siebel Analytics Scheduler

If you are not using Siebel Analytics Scheduler, you do not need the information in this section.

The Scheduler supports several commercial databases with ODBC connections. For a complete list of supported databases, see *System Requirements and Supported Platforms for Siebel Analytics* on Siebel SupportWeb.

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

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

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

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.MSSQL7.sql and execute it to create the Siebel Analytics Scheduler tables.
- 3** Open the file SAACCT.MSSQL7.sql and execute it to create the Accounting table.

To create a database and tables for Oracle

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

To create a database and tables for IBM DB2

- 1** Create a database named S_NQ_SCHED with a valid user ID and password.
- 2** Using Command Center, open the file SAJOBS.DB2.sql and execute it to create Siebel Analytics Scheduler tables.
- 3** Open the file SAACCT.DB2.sql and execute it to create the Accounting table.

Updating the Scheduler Configuration

If you are not using Siebel Analytics Scheduler, you do not need the information in this section.

The Windows user ID used to access the Siebel Analytics Server Administration Tool must have the appropriate permissions to modify the Registry.

To update the Scheduler configuration

- 1 From the Siebel Analytics Server Administration Tool, open a repository in online mode.
- 2 Choose Manage > Jobs from the Administration Tool toolbar.

The Siebel Analytics Job Manager opens in a new window.

For more on updating the Scheduler configuration, refer to the section on configuring Siebel Analytics Scheduler in *Siebel Analytics Scheduler Guide*.

NOTE: You may be running anti-virus software on the machine where Siebel Analytics Scheduler is installed. However, if the virus scanner is constantly scanning inbound files in the Scheduler Temporary File Path, performance degrades significantly. It is recommended that you set the virus scanner to exclude files in the Scheduler Temporary File Path.

Changing the Account Under Which a Windows Service Runs

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

To change the account under which a Windows service runs

- 1 On the machine in which Siebel Analytics is installed, select Start > Settings > Control Panel.
- 2 Open the Services applet by double-clicking the Services icon in the Control Panel.
- 3 Select the Siebel Analytics service and click Startup. The Service dialog opens.

- 4 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.
- 5 Select the user account in which you want the service to run, click Add, and then click OK.
- 6 Enter the password for the user in the Services dialog, 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.

Notes on Dashboard Access

The method of accessing Siebel Analytics Dashboards differs depending on whether you are installing Siebel Analytics applications or the Siebel Analytics Stand-Alone product. The difference is how you handle the Siebel7message.xml file.

Siebel Analytics Applications Dashboard Access

If you installed a Siebel Analytics application, the Siebel Analytics dashboards are accessible only through the Siebel eBusiness application interface. [Chapter 10, “Siebel Industry Applications Analytics Metadata,”](#) describes the configuration necessary for the Siebel Analytics dashboards to be accessible from views in the Siebel eBusiness application.

To access the Analytics dashboard from outside the Siebel eBusiness application

- 1 In the \$INSTALL_DIR\SiebelAnalytics\Web\App\Res\CustomMessages\ directory, look for the file named Siebel7Messages.xml.
- 2 Delete this file.
- 3 Restart the Web server.

Siebel Analytics Stand-Alone Dashboard Access

If you installed Siebel Analytics Stand-Alone, you must remove the Siebel7message.xml file. This file is in the directory \$INSTALL_DIR \SiebelAnalytics\Web\Servlet\Res\CustomMessages. The Siebel7message.xml file hides the Siebel Intelligence Dashboard links on the top as well as the links to Answers, Delivers, and Log Out, and you are not able to access these links when using Siebel Analytics Web.

The Siebel7Messages.xml file is not required to be in the \Web\App\Res\Messages directory if Siebel Analytics is not integrated with the Siebel operational application.

Troubleshooting the Siebel Analytics Installation on Windows

This section details some common problems observed during installation and suggests possible solutions. To resolve the problem, look for it in the Symptom/Error Messages column in [Table 8](#).

Table 8. Common Installation Problems and Solutions for Windows Platforms

| Symptom/Error Messages | Diagnostic Steps/Cause | Solution |
|--|--|--|
| The Windows Eventvwr system log shows the following message: The server failed to load application '/LM/W3SVC/1/ROOT.' The error was 'The specified metadata was not found.' | The browser did not load the default.asp page. | Change the default.asp page. To do this, follow the procedure in “Changing the Siebel Analytics Default ASP Page” on page 52. |
| In some cases, the desktop icon in the <i>Please Select a License File</i> screen does not function. | Java software problem. | Instead of using the desktop icon, select the license file from the tree browser. |

Table 8. Common Installation Problems and Solutions for Windows Platforms

| Symptom/Error Messages | Diagnostic Steps/Cause | Solution |
|--|--|---|
| ERROR: Couldn't Launch Server on Port #n | <p>The TCP/IP settings are not correct on your computer.</p> <p>The specified port is not available.</p> <p>Image server may already be running.</p> | <p>Make sure that your TCP/IP settings are correct.</p> <p>Pick another port number.</p> <p>If you just upgraded Image Server from a previous version on NT 4 or NT 2000 OS, and with PopChart Image Server running as a service, reboot the server.</p> <p>Check to see if image server is already started and running as a service on NT.</p> |
| INVALID KEY: PopChart Image Server will shut down in three hours | <p>The license key that you entered might not be the correct key, or you may not have entered a license key.</p> | <p>Make sure that correct license key is entered.</p> |

Installing Siebel Analytics Software in the UNIX Environment

2

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

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

This chapter is also intended to supplement the Siebel Analytics documentation for users running supported Siebel Analytics components on computers using a UNIX operating system. It contains the following topics:

- [“Supported Siebel Analytics Components” on page 72](#)
- [“Installation Prerequisites—All UNIX Platforms” on page 73](#)
- [“Installing and Configuring Siebel Analytics Components” on page 75](#)
 - [“Installation Prerequisites for HP-UX” on page 74](#)
- [“Installing the Siebel Analytics Server” on page 75](#)
- [“After Installing the Siebel Analytics Server” on page 83](#)
 - [“Siebel Analytics Scheduler Tables \(Stand-Alone Only\)” on page 84](#)
 - [“Post-Installation Requirements for Solaris” on page 87](#)
 - [“Post-Installation Requirements for IBM AIX” on page 88](#)
 - [“Post-Installation Requirements for HP-UX” on page 90](#)
 - [“Installing and Configuring Corda PopChart Image Server” on page 92](#)
 - [“Configuring Xvfb for Siebel Delivers” on page 95](#)

- “Installing Siebel Analytics Web Components” on page 97
 - “Installing on Sun ONE Web Server on Solaris” on page 99
 - “Installing Siebel Analytics Web on WebSphere” on page 103
 - “Installing on Apache Tomcat Stand-Alone” on page 109
- “Tools for Setting Up Basic Siebel Analytics Server Settings” on page 112
- “Server and Web Configuration Options” on page 116
 - “Configuration Options for the Siebel Analytics Server” on page 116
 - “Configuration Options for Siebel Analytics Web” on page 117
- “Inserting Your Siebel Analytics Web License Keys” on page 116
 - “Upgrading Your Previous Siebel Analytics Web Catalog” on page 118
- “Troubleshooting the Siebel Analytics Installation on UNIX” on page 118

Supported Siebel Analytics Components

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

- Siebel Analytics Server
- Siebel Analytics Web: Siebel Intelligence Dashboard, Siebel Answers, and Siebel Delivers
- Siebel Analytics Scheduler
- Siebel Analytics Client

The Siebel Analytics repository and Web catalog are portable to UNIX and Windows platforms.

NOTE: The Siebel Analytics Server Administration Tool is currently supported only on the Windows platform.

Installation Prerequisites—All UNIX Platforms

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

- Choose a user ID that has permissions to run all analytics processes (including the Web server). You may need to create the user ID first.
- If you are reinstalling or installing a new version of Siebel Analytics, you must first uninstall the software. Make backups of the Web Catalog, repository (.rpd), NQSCONFIG.INI, and NQCLUSTERCONFIG.INI files and move them to a temporary location.
- An uninstall utility is not provided on UNIX. You can delete the installation directory after saving any repositories and configuration files.
- For DCOM and TCP/IP information, review [“Upgrade Note On Siebel Analytics Server Client/Server Communication”](#) on page 33.
- You must have the third-party software for Java and Xvfb installed. See *System Requirements and Supported Platforms for Siebel Analytics* on Siebel SupportWeb for the correct versions to use with this version of Siebel Analytics.
- Make sure that UNIX-based Siebel Analytics Servers are not included in a Siebel Analytics cluster.
- If you are installing Corda PopChart Server, install from X Window System.
- You need to have Perl 5.0 or above installed. Make sure Perl is in your PATH.

NOTE: The Siebel Analytics Server Administration Tool is currently supported only on the Windows platform.

Installation Prerequisites for HP-UX

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

```
max_thread_proc: 1024

maxdsiz: 0x90000000

maxssiz: 16777216

maxtsiz: 0x40000000

shmseg: 120

swapmem_on: 1

maxfiles: 2048

maxfiles_lim: 2048

dbc_max_pct: 50
```

The following HP operating system patches (or more recent versions) 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 *System Requirements and Supported Platforms for Siebel Analytics* on Siebel SupportWeb.

A Note on Beta Repositories

If you created repositories using Beta Siebel Analytics, these repositories are not compatible with this version. Either uninstall the Beta Siebel Analytics before installing this version, or do the following to transfer your repository information.

To transfer repository information from a Beta repository

- 1 Generate a UDML script from the Beta repositories using sa-udmlgen.exe.
- 2 Save the script to a text file.
- 3 Install this version of Siebel Analytics.
- 4 Recreate the repository from the UDML script by running sa-udmlexec.exe.

Installing and Configuring Siebel Analytics Components

This section explains how to install and set up Siebel Analytics components on UNIX. It contains the following topics:

- [“Installing the Siebel Analytics Server” on page 75](#)
- [“If the Siebel Analytics Server Fails to Start” on page 84](#)
- [“Installing and Configuring Corda PopChart Image Server” on page 92](#)
- [“Server and Web Configuration Options” on page 116](#)

Installing the Siebel Analytics Server

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

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

NOTE: The user ID used with the Analytics Web component must have the same permissions as the user ID used by the Web server. Using the same login for both is recommended.

Running the Installer

The following procedure explains how to install the Siebel Analytics software on UNIX.

To install the Siebel Analytics Server software on UNIX

- 1** Log in as the user that runs the Analytics processes, insert the Siebel Analytics Server installation CD-ROM, and change to the directory where the installation CD-ROM is mounted.
- 2** Run one of the following installers.
 - For Analytics applications, run:
`sainstall-apps`
 - For Stand-Alone Analytics, run:

sainstall

The installation script has various prompts and default answers to prompts. The prompts and their defaults and meanings (for all options) are shown in the table.

| Prompt | Default | Notes |
|--|---|---|
| Language for error messages | 1. (English-US) | The last option (19. Abort) exits the program. |
| Setup type | 5. (Everything) | The setup type chosen determines which subsequent prompts appear. |
| Default Siebel Analytics root directory | /usr/local/SiebelAnalytics | |
| Siebel Analytics Server listener port number | 9703 | |
| Cache Location | /usr/local/SiebelAnalytics/Data/Cache | |
| Turn on cache | Y | If you choose n (No), the program skips directly to the Extracting components step. |
| Size of the Cache | 500 MB for Analytics applications 100 MB for Stand-Alone Analytics | |
| Machine running PopChart Server | localhost | |
| Port for PopChart Server | 81 | The steps requesting the PopChart Server machine name refer to “Installing and Configuring Corda PopChart Image Server” on page 92. |
| Siebel Analytics Server name | local | Local is the same as localhost. |

NOTE: The value for Port must be the TCP/IP port the Siebel Analytics Server is using for client/server communications. For more information, see [“RPC_SERVICE_OR_PORT” on page 159](#).

3 From the setup directory \$INSTALLDIR/setup, run one of the following scripts:

- If you are using sh or bash, run

```
. sa.sh
```

- If you are using csh, run

```
source sa.csh
```

4 Verify your data sources in \$INSTALLDIR/setup/userodbc.reg.

For example:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\ODBC\ODBC.INI\AnalyticsWeb]
"Driver"="/usr/local/SiebelAnalytics/Bin/libnqsodbc.so"
"Description"="Siebel Analytics Server"
"ServerMachine"="LOCAL"
"Catalog"=" "
"UID"=" "
"PWD"=" "
"Repository"=" "
"Port"="9703"
```

- 5 To update the registry and verify this grammatically, run the following command:

```
regedit -c -s $INSTALLDIR/setup/userodbc.reg
```

All of the registry files (.reg extension) can be manually imported into the registry using the regedit command. These are examples:

- To display the Registry Editor console, type regedit.
- To update the registry in silent mode, type regedit -c -s *nnn*.reg where *nnn* is the name of the registry.

NOTE: Manual changes to the registry may be overwritten by scripts. You should make all changes in the registry files, and then use the console to verify the changes.

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

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

- Sample 1 (excerpts):

```
setenv ORACLE_HOME /export/home/oracle/8.1.7
setenv ORACLE_SID orcl
setenv TNS_ADMIN ${ORACLE_HOME}/network/admin
setenv PATH ${ORACLE_HOME}/bin:/opt/bin:${PATH}
setenv LIBPATH ${ORACLE_HOME}/lib:${LIBPATH}:/opt/j2se/jre/
lib/rs6000
setenv LD_LIBRARY_PATH ${ORACLE_HOME}/
lib:${LD_LIBRARY_PATH}:/opt/j2se/jre/lib/sparc
setenv DB2DIR /usr/lpp/db2_07_01
setenv DB2INSTANCE qauser7a
setenv INSTHOME /home/qa-sm/qauser7a
setenv SQLLIB /home/qa-sm/qauser7a/sqllib
if ( -f $SQLLIB/db2cshrc ) source $SQLLIB/db2cshrc
setenv JAVA_HOME /usr/java_dev2
setenv LD_LIBRARY_PATH $DB2DIR/lib:$LD_LIBRARY_PATH
export LD_LIBRARY_PATH
```

- Sample 2 (excerpts):

```
#!/usr/bin/csh
setenv ORACLE_HOME /opt/oracle/8.1.6c
setenv ORACLE_SID orcl
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
```

- 7** Run `sa-init.sh` or `sa-init.csh` to configure (for a new installation) or to reconfigure the registry entries with your changes to the registry files, such as `userodbc.reg`.

Changing the Environment Variables

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

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

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

To change the environment variables

- 1 Log out and close your X Window shell, then start a new X Window shell.
- 2 Start the Siebel Analytics Server from the \$INSTALLDIR/setup directory by running one of the following scripts:
 - If you are using sh or bash:

```
run-sa.sh start
```
 - If you are using csh:

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

NOTE: You need to source these scripts. See [Step 3](#) of the procedure in “[Installing the Siebel Analytics Server](#)” on page 75.

- 3 If you have set up your environment with sa.sh or sa.csh, run:

```
ngscomgateway.exe &
```

- a For the standard shell:

```
nohup ngscomgateway.exe >/dev/null 2>&1 &
```

b For the C shell:

```
nohup nqscomgateway.exe >&/dev/null &
```

After Installing the Siebel Analytics Server

After the installation, test the setup.

To test the Siebel Analytics Server installation

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

- If you are using sh or bash, run:

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

- If you are using csh, run:

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

To test the client/server connectivity, run:

```
nqcmd.exe
```

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

- If you are using sh or bash:

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

- If you are using csh:

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

For example:

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

- If you have set up your environment with sa.sh or sa.csh:

```
nqsshutdown.exe -d <data source name> -u administrator -p  
<password>
```

NOTE: If the password is empty, enclose it in double quotes (“”).

If the Siebel Analytics Server Fails to Start

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

- NQServer.log file, located in the Log subdirectory in the Siebel Analytics software installation directory. You can use a text editor to view this file. (Set your viewer to UTF-8 to avoid seeing garbled text.)
- Run `/usr/sbin/syslogd` and look for any system and/or Siebel Analytics Server-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.

Siebel Analytics Scheduler Tables (Stand-Alone Only)

This section applies only if you are running Siebel Analytics Stand-Alone and are using Siebel Analytics Scheduler. It describes the back-end database tables required by Siebel Analytics Scheduler and explains how to create them.

NOTE: If you are not using Siebel Analytics Scheduler, you do not need the information in this section. If you have pointed the Siebel Analytics Server to the Siebel transactional database, you do not need to create Siebel Analytics tables. If you are upgrading from any version prior to version 7.5, contact Siebel Technical Support for assistance.

Some of the details of the tasks required are the same as those described in [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment,”](#) including the following:

- [“About Configuring Analytics Scheduler” on page 63](#)
- [“About Analytics Scheduler Tables” on page 63](#)
- [“Creating Database Tables for Siebel Analytics Scheduler” on page 65](#)

- [“Changing Scheduler Table Names” on page 64](#)

Updating the Scheduler Configuration in UNIX

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

```
schconfig.exe
```

Starting and Shutting Down the Scheduler Process on UNIX

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

Starting the Scheduler on UNIX

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

To start the Scheduler on UNIX

- With a Korn, Bourne, or bash shell, use the command:

```
run-sch.sh start
```

- With C shell, use the command:

```
run-sch.csh start
```

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 the machine has no monitor, point it to another machine running X Window.

Shutting Down the Scheduler on UNIX

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

To shut down the Scheduler in UNIX

- With a Korn, Bourne, or bash shell, use the command:

```
run-sch.sh stop -p <password>
```

- With C shell, use the command:

```
run-sch.csh stop -p <password>
```

- If these commands fail, you may run the command:

```
mwcleanup
```

Configuring IBM DB2 Connect for Queries on Siebel Analytics Server

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

This configuration is described in the procedure [“Configuring IBM DB2 Connect for Queries on Siebel Analytics Server”](#) on page 52.

Post-Installation Requirements for Solaris

If you are using some Oracle clients on Solaris, make sure that the ORACLE_HOME variable is set.

- 1 Navigate to INSTALLDIR/Bin.
- 2 Use the following command:

```
ln -s $ORACLE_HOME/lib/libclntsh.so libclntsh.so.8.0
```

NOTE: Only certain specific versions of Oracle clients are supported. Refer to *System Requirements and Supported Platforms for Siebel Analytics* on Siebel SupportWeb.

Setting the ORACLE_HOME Variable for Oracle 9i Clients

If you are using Oracle 9i, you must 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, as follows:

```
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
```

Setting the Oracle Database for the Siebel Analytics Server Machine

If your native database is Oracle, the machine running Siebel Analytics Server must have the Siebel Analytics supported Oracle Client installed. The entry name in the tnsnames.ora file must match the Siebel Analytics repository Data Source Names defined in the connection pools for all physical Oracle databases. Therefore, 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 following additional topics:

- [“Configuring Oracle Databases for the Siebel Analytics Server Machine” on page 49](#)
- [“About Updating Row Counts in Native Databases” on page 51](#)

Post-Installation Requirements for IBM AIX

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

```
export MW_GMA_VADDR=0xb0000000
export LDR_CNTRL='LOADPUBLIC@MAXDATA=0x60000000'
export AIXTHREAD_SCOPE=S
export AIXTHREAD_MNRATIO=1:1
export AIXTHREAD_MUTEX_DEBUG=OFF
export AIXTHREAD_RWLOCK_DEBUG=OFF
export AIXTHREAD_COND_DEBUG=OFF
export RT_GRQ=ON
export SPINLOOPTIME=1000
```



```
export YIELDLOOPTIME=4
export MALLOCMULTIHEAP=considersize,heaps:4
export MALLOCYPE=buckets
export LDR_CNTRL='LOADPUBLIC@MAXDATA=0x50000000'
```

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

Post-Installation Requirements for HP-UX

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

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

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

Here is an example of these modifications:

```
/export/home/oracle/9.2.0.2/lib32:/voll/hpbuild1/SiebelAnalytics/Bin:/voll/hpbuild1/SiebelAnalytics/mainsoft/odbc/ux11/lib:/voll/hpbuild1/SiebelAnalytics/mainsoft/mw/lib-ux11:/voll/hpbuild1/SiebelAnalytics/mainsoft/mw/lib-ux11_optimized:/voll/hpbuild1/SiebelAnalytics/setup:/opt/j2se/jre/lib/
```

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

- a For user.sh:

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

- b For user.csh:

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

Installing Siebel Analytics Web Under UNIX

The following procedures use \$INSTALLDIR to refer to the directory where the Siebel Analytics software is being installed; for example, /usr/local/SiebelAnalytics.

Siebel Analytics Web Installation Prerequisites

Before installing Siebel Analytics Web, other software must be installed and configured. This software includes:

- PopChart Image Server (PCIS)
- X Virtual Frame Buffer (Xvfb)

PopChart Image Server (PCIS)

Siebel Analytics Web uses a third-party charting engine, PopChart Image Server or PCIS, for rendering charts. PCIS runs as a separate server.

During the main Siebel Analytics installation, when you choose an option that includes the Analytics Web component, the installation script prompts you for the server name and port number on which the PopChart Image Server was installed. (See [Step 2 of “To install the Siebel Analytics Server software on UNIX” on page 76.](#)) If you configured PCIS to run on a port other than the default, you must provide the appropriate values here (see [“Installing and Configuring Corda PopChart Image Server” on page 92.](#)) Otherwise you may accept the default values.

If you decide to change the port number or machine that runs the PopChart Image Server, you must reconfigure Analytics Web to point to the new location. 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. See [“Configuration Options for Siebel Analytics Web” on page 117.](#)

X Virtual Frame Buffer (Xvfb)

The X Virtual Frame Buffer is an X Window server that renders to virtual memory rather than to a graphics display device. While traditional (video) X servers require graphics hardware to be present, the Xvfb server performs all its rendering in software, and can run on a computer with or without a graphics display device. Both a video X server and an Xvfb server can run simultaneously on a system, but they must have different display numbers. Using Xvfb, PopChart Image Server renders images suitable for delivery by Siebel Delivers. See [“Configuring Xvfb for Siebel Delivers” on page 95.](#)

NOTE: If you are not using Siebel Delivers, then Xvfb is not required.

Installing and Configuring Corda PopChart Image Server

This section describes the installation of Corda PopChart Image Server (PCIS) version 3.8.x. PCIS uses appearance files to determine the look and feel of generated images on Siebel Analytics Web. By default, the appearance files required by Analytics Web are installed at \$INSTALLDIR/Web/Servlet/Res/s_Siebel7/PopBin.

NOTE: X Window System is required to install PopChart Imager Server.

Before beginning the PCIS installation, do the following:

- Obtain your license file for PCIS. Siebel Systems provides the file and instructions to implement it.
- Decide on a directory where you want to install the binaries for PCIS.
- Decide on a port number that you want PCIS to listen on.
- Back up the old template files installed by default. These are located in the directory \$INSTALLDIR/SiebelAnalytics/Web/App/Res/s_Siebel7/Charts. Rename this directory to Charts.GSP. For example:

```
/SiebelAnalytics/Web/App/Res/s_Siebel7/Charts.GSP
```

NOTE: Modifications to the PopChart appearance files used in charting are not supported by Siebel Systems.

The following examples use an installation path `usr/local/Corda`. Change this path to match your own environment, as applicable.

To install the PopChart Image Server

- 1** From the PopChart subdirectory on the installation CD-ROM, run the PopChart installer `PCIS383.bin`.
- 2** The installer prompts you to select the following:
 - a** A directory for installation. Select an appropriate value here; for example, `/usr/local/Corda`.

- b** Location of a JDK/JRE to use for PCIS.
 - For Solaris and HP-UX platforms, use JDK/JRE 1.3.1 or greater.
 - For AIX, use JDK 1.3.0.
- c** One of several product Installation Sets. Select the option for Production Server.
- 3** Add the location of the Analytics Web appearance files to the PCIS paths.xml configuration file. The paths.xml file is located at /usr/local/Corda/image_server/pcis_classes/path.xml.

Insert the following element between the <PathMaps> and </PathMaps> tags:

```
<Map Name="nqapfiles" Path= "$INSTALLDIR/Web/Servlet/Res/s_Siebel7/PopBin/*" Action="Load"/>
```

Replace \$INSTALLDIR by the full path to the Analytics installation directory.

NOTE: This is an XML file. Take care to follow XML syntax rules.

Installing and Customizing Image Server Scripts

PCIS is distributed with startup and shutdown scripts. These are also included in the PopChart subdirectory on the CD-ROM or DVD, in a file named scripts.tar. The following procedure installs and customizes these scripts.

To install and customize PCIS startup and shutdown scripts

- 1** Copy the scripts.tar file from the PopChart subdirectory on the CD-ROM to /usr/local/Corda directory after installing the PopChart Server.
- 2** Uncompress the tar file using the command:

```
tar -xf scripts.tar
```

This command creates a scripts directory.

- 3** Locate the file pcis.sh in the scripts directory and set the value PCIS_PATH to the image_server subdirectory of the PCIS installation directory. For example:

```
PCIS_PATH=/usr/local/Corda/image_server
```

- 4 Locate the file `pcis.settings` within the scripts directory. Edit the `pcis.settings` file values. Be sure to choose the correct path for `JAVA_HOME`.

| Settings | Comment |
|------------------------------------|--|
| <code>JAVA_HOME = /usr/java</code> | The path to the JDK/JRE that is to be used for PCIS. |
| <code>PORT = 81</code> | The port through which HTTP requests for end-users are serviced by PCIS. |
| <code>COMMPORT = 82</code> | A port on which PCIS listens for programmatic requests made by clients using a proprietary protocol. |
| <code>DISPLAY = 1:0</code> | The X Window display that PCIS uses to generate certain types of images. This setting is only relevant if you are configuring Siebel Delivers. More details for this setting are provided in the section that describes Xvfb configuration for PCIS. |

- 5 Set the executable bit for the `pcis.sh` script.

This script can now be used to start, stop, restart and show status about PCIS. Run the script without any arguments to display usage.

Starting and Stopping the Image Server

PCIS may run as any user on the system and does not have to run as the same user as the other Analytics processes. In the example, ports 81 and 82 were chosen for PCIS to listen on, and therefore PCIS runs as a root process. If ports greater than 1024 are selected, then PCIS does not need to run as a root process. You determine the value of `PORT` during the installation of Siebel Analytics Web, using the installation script provided. If these two port values do not match, charting does not work.

Requests to PCIS may also be routed through a Web server. Corda provides various means for doing this. Consult Corda documentation, as well as the section [“Configuration Options for Siebel Analytics Web” on page 117](#), to explore these options.

The following procedure shows how to start and stop the PCIS server.

To start or stop PCIS

- 1 Make sure that you are logged in as root.
- 2 Execute the command:

```
/usr/local/Corda/image_server/scripts/pcis.sh start
```

To stop PCIS, execute the command:

```
/usr/local/Corda/image_server/scripts/pcis.sh stop
```

Configuring Xvfb for Siebel Delivers

Each platform has its own particular way of starting Xvfb, and the Xvfb start process is outlined separately for Solaris, AIX and HP-UX. In each case root access may be required.

NOTE: These directions are tips or guidelines. Consult the documentation from the hardware vendor for details.

In addition to have a different starting process, each platform implements certain security rules by which users may or may not access a specific X screen. If you do not wish to run PCIS as root, consult your hardware vendor's documentation regarding security restrictions with Xvfb usage. It is not necessary for PCIS to run as the default user of the rest of the Siebel Analytics processes.

To configure Xvfb on Solaris

Assuming that Xvfb is installed at `/usr/X11R6/bin/Xvfb`:

- 1 Configure Xvfb on display 1 screen 0.
- 2 Start Xvfb (from bash or sh) using the command:

```
/usr/X11R6/bin/Xvfb :1 -screen 0 1024x768x8 > /dev/null 2>&1 &
```

In this case the DISPLAY environment variable in the `pcis.settings` file must be set to `:1.0`. For example:

```
DISPLAY=:1.0
```

To configure Xvfb on AIX

The IBM X server has been extended to support Xvfb.

- 1** Install the X11.vfb and OpenGL.OpenGL_X.dev.vfb packages.
- 2** Reboot the system after installing these packages, as they require a kernel extension to be loaded at boot time.

NOTE: Consult AIX documentation for details regarding the installation procedure for Xvfb, as well as any necessary system patches.

- 3** After you have installed the software, execute the following command to start Xvfb:

```
/usr/bin/X11/X -force -vfb -x abx -x dbe -x GLX &
```

For an example of a machine without graphics hardware, where there is no X server running on display 0, configure the Xvfb server to run on display 0.

In this case the DISPLAY environment variable in the pcis.settings file must be set to :0.0. For example:

```
DISPLAY=:0.0
```

To configure Xvfb on HP-UX

There are three tasks required to get Xvfb running on HP-UX:

- Install the appropriate X server patches, if necessary.
- Configure the Xvfb server.
- Run the Xvfb server.

Defer to HP documentation for the first task.

To configure the Xvfb server

- 1 In order to configure Xvfb, decide on a display number and a screen. For example, use display 1 and screen 0.

All HP X servers use configuration files named X#screens (where # is the display number). The X#screen configuration files are located in the directory /etc/X11.

- 2 Create the file /etc/X11/X1screens (from the example in which display 1 is the Xvfb display) and add the following two lines:

```
ServerOptions
ServerMode Xvfb
```

- 3 Start the Xvfb server by issuing the following command:

```
/usr/bin/X11/X :1 -screen 0 1024x768x24 &
```

In this case the DISPLAY environment variable in the pcis.settings file must be set to :1.0. For example:

```
DISPLAY=:1.0
```

Refer to the man page for the X server for additional Xvfb options.

Installing Siebel Analytics Web Components

During the main Siebel Analytics installation, you should have selected the Siebel Analytics Web component to install, either as part of the Complete installation option or by itself. The credentials for the Analytics Web user should be identical to the permissions for the user running all Siebel Analytics processes.

The UNIX version of Analytics Web is implemented as a thin J2EE servlet wrapper on top of a highly optimized set of native libraries. The servlet wrapper adheres to the Java Servlet 2.2 specification, and therefore part of the installation process involves deployment of this servlet. The deployment procedure for the servlet roughly mirrors the procedure used for any other J2EE servlet, with some special consideration given to the fact that much of the functionality is provided through native libraries.

NOTE: If the Analytics Web and Analytics Server components run on the same machine, then both the Analytics Server process and the Web Server process hosting Analytics Web must run under the same user credentials. This restriction does not apply if the two components are running on separate machines.

The following examples for installing on different UNIX platforms assume that you are installing on a machine named `saw.siebel.com` and that all Analytics processes run as the user `sa`.

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

Stopping and Starting the Siebel Analytics Web Server on UNIX

To start or stop the server with Siebel Analytics Web environment settings, use the following command line script:

```
sa-web.sh
```

Installing on Sun ONE Web Server on Solaris

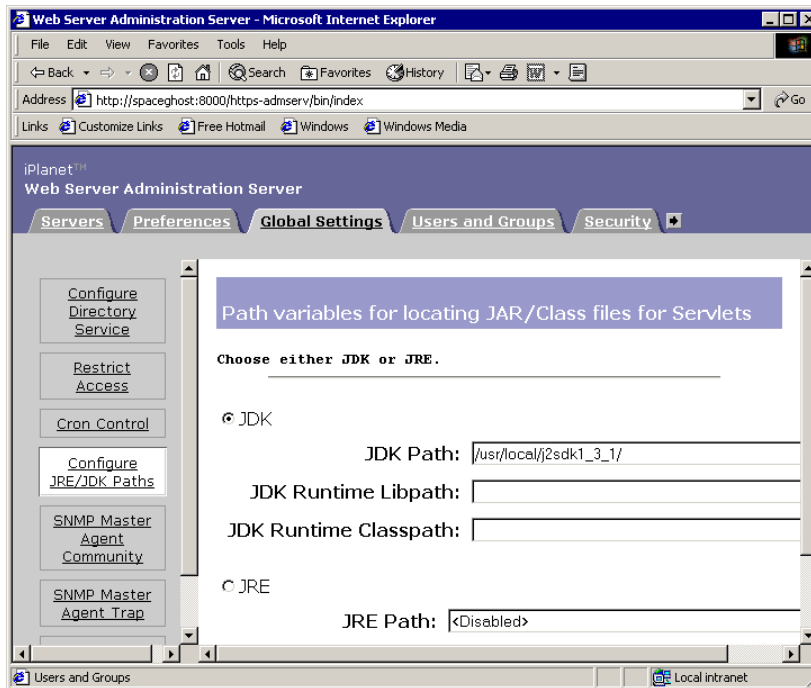
Siebel Analytics Web requires that its servlet container be configured to use Sun JDK/JRE version 1.3.1_01 or higher. Change settings using the administration console in the Web Server Administration Server.

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 section is now called Sun ONE, but the installation paths and directories refer to its older name, iPlanet.

To create a new virtual server on Sun ONE

- 1 Navigate to the Sun ONE Web Server Administration Server > Global Settings tab.



- 2 Create a new virtual server.
- 3 Assign the Server Name field a value that can be accessed through DNS.

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

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

- 4 In the Server Port field, assign the port number you wish the Web server process to listen on.
- 5 Assign the Server Identifier field a value that helps an administrator to identify the purpose of a particular virtual server.
- 6 Set the Server User field to sa, because you want the Web server process to run under this user's credentials. Default values may be accepted for all other fields.

Editing the web-apps.xml File

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.

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

To edit the web-apps.xml file

- 1 Locate this directory. For example:

```
/usr/local/ipplanet6sp1/servers/https-saw
```

- 2 Locate the file `web-apps.xml` in the config subdirectory of your virtual server's directory (for example, `/usr/local/ipplanet6sp1/servers/https-saw/config/Web-apps.xml`).
- 3 In this file, add the following line between the `<vs>` and `</vs>` tags:

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

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. The modified file should resemble the following:

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

- 4 Replace \$INSTALLDIR with the complete path to the Analytics installation directory.
- 5 Copy the file \$INSTALLDIR/setup/sa-web.sh to your virtual server's directory (for example:

```
/usr/local/iplanet6sp1/servers/https-saw/sa-web.sh)
```

Set the executable bit for this file.

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

NOTE: To start up the server with Siebel Analytics Web environment settings, the server must be started from the command line script sa-web.sh. The server should be stopped using the stop script in the virtual server's directory.

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`.

If, however, you want to invoke the application as `http:// <host:port> /CUSTOM`, where CUSTOM represents a different virtual IP address, you must configure this setting in the web-apps.xml file as follows:

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

In addition, the Web Server parameter in schconfig.exe > Configure iBots must have the following value:

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

where CUSTOM is as specified in the previous web-app URI path.

Testing the Sun ONE Web Server Installation

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

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

To test the Sun ONE Web server installation

Make sure that you are logged in as the user that all Siebel Analytics processes are supposed to run under, in this case, sa.

- 1 Switch to the virtual server's directory and execute the following command:

```
./sa-web.sh
```

Make sure that you have navigated to the virtual server's directory before executing the above command. For example, if your current directory is `/export/home/sa` and you execute the following command, the Analytics Web server does not start correctly:

```
/usr/local/iplanet6sp1/servers/https-saw/sa-web.sh
```

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

```
http://saw.siebel.com:9087/analytics
```

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

NOTE: Siebel Analytics Web requires that the stack size for any worker threads on which it runs requests be at least 1MB. The two settings that control stack size are `StackSize` and `NativePoolStackSize`.

Installing Siebel Analytics Web on WebSphere

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

- Confirm WebSphere daemon is running (see [“To confirm that the WebSphere daemon is running”](#)).

- Confirm WebSphere is configured correctly (see [“To modify setupCmdLine.sh file to include Siebel Analytics environment variables”](#) on page 104, [“To stop the Web server”](#) on page 105, and [“To restart WebSphere”](#) on page 105).
- Create a new application server (see [“To create a new application server”](#) on page 106).
- Create a WebARchive (WAR) file (see [“To create a WAR file”](#) on page 106).
- Deploy the WAR file (see [“To deploy the WAR file”](#) on page 107).
- Modify setupCmdLine.sh file to include Siebel Analytics environment variables.
- Restart WebSphere (see [“To restart WebSphere”](#) on page 105).
- Confirm that Siebel Analytics Web is functioning (see [“To confirm Analytics Web is functioning”](#) on page 108).

To confirm that the WebSphere daemon is running

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

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

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

- 4 If Siebel Analytics had been previously installed, but is not installed now, you may see an error message when starting WebSphere. If you receive an error message, do the steps listed in [“To modify setupCmdLine.sh file to include Siebel Analytics environment variables”](#) on page 104.

To modify setupCmdLine.sh file to include Siebel Analytics environment variables

- 1 Start a telnet session to the machine on which WebSphere is installed.
- 2 Navigate to \$WAS_HOME/bin.

NOTE: \$WAS is the directory where WebSphere is installed, usually /usr/WebSphere/AppServer.

- 3 Edit the `setupCmdLine.sh` file to append the following command to the last line:

```
. INSTALLDIR/setup/sa-webinit.sh
```

For example,

```
. /usr/local/SiebelAnalytics/setup/sa-webinit.sh
```

NOTE: Include the period and space at the beginning of the line.

To stop the Web server

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

- Start the Windows Administration Client.

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

- Run the Administration Console through X Window.

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

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

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

To restart WebSphere

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

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

```
ps -ef | grep Web
```

The process requires approximately a minute to finish.

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

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

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

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

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

To create a new application server

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

To create a WAR file

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

```
/usr/local/SiebelAnalytics
```

- 3 Set the JAVA_HOME environment variable, if it is not already set.

```
env | grep JAVA_HOME
```

```
setenv JAVA_HOME /usr/java130
```

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

```
$JAVA_HOME/bin/jar cf Analytics.war -C Web/Servlet .
```

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

To deploy the WAR file

- 1 In the WebSphere Advanced Administrative Console, go to Click the Install stand-alone module radio button.
- 2 Click Browse, then click Open.
- 3 In the Application name field, enter an arbitrary name (for example, Analytics).
- 4 In the Context root for web module field, enter Analytics.
- 5 Click Next until the Selecting Application Servers window opens.
If the Virtual Host value is empty, select default_host.
- 6 Click Select Server.
Select the server created in [“To create a new application server” on page 106.](#)

NOTE: Do not use the default server.

- 7 Click Finish.

To restart WebSphere

- 1 In the WebSphere Advanced Administrative Console, navigate to WebSphere Administrative Domain > Nodes > *Server Name*.
Right-click the server and choose Stop. In the confirmation dialog box, click Yes.
- 2 After the WebSphere Advanced Administrative Console closes, start a telnet session to the machine on which WebSphere has been installed.
- 3 Navigate to \$WAS_HOME/bin.

- 4 Run the following command:

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

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

- 5 Run the following command:

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

Wait while WebSphere starts. WebSphere is started when the time column no longer increases when running multiple iterations of `ps -ef | grep WebSphere`.

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

To confirm Analytics Web is functioning

- Point the Web browser to `http:// <Server Name > :9080/Analytics`.

You should see the Siebel Analytics login Screen.

To check the port number being used by Siebel Analytics

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

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

Installing on Apache Tomcat Stand-Alone

Apache Tomcat may be configured to work in conjunction with the Apache HTTP Server. For the details of this 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. The versions required are listed in *System Requirements and Supported Platforms for Siebel Analytics* on Siebel SupportWeb.

NOTE: Siebel Analytics Web has not been certified for all Java versions.

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 own deployment.

To install on Apache Tomcat (stand-alone)

1 Modify the Tomcat startup script `/usr/local/jakarta-tomcat-4/bin/startup.sh` to run the Analytics Web initialization script located at `$INSTALLDIR/setup/sa-webinit.sh`.

a Configure other environment variables as well. Insert the following lines:

```
CATALINA_HOME=/usr/local/jakarta-tomcat-4

JAVA_HOME=/usr/java

export CATALINA_HOME JAVA_HOME

. $INSTALLDIR/setup/sa-webinit.sh
```

b Confirm that the beginning of your file resembles the following extract:

```
#!/bin/sh
# -----
# Start Script for the CATALINA Server
#
# $Id: startup.sh,v 1.1.4.1 2002/01/30 18:10:40 patl Exp $
# -----

CATALINA_HOME=/usr/local/jakarta-tomcat-4
```

```
JAVA_HOME=/usr/java
export CATALINA_HOME JAVA_HOME
. INSTALLDIR/setup/sa-webinit.sh
```

- c** Replace INSTALLDIR with the full path to the directory where Siebel Analytics has been installed, and verify that CATALINA_HOME and JAVA_HOME point to appropriate values for your configuration.

NOTE: A period precedes the path to the Siebel Analytics Web initialization script.

- 2** Insert the following lines near the top of the Tomcat shutdown script, located at /usr/local/jakarta-tomcat-4/bin/shutdown.sh:

```
CATALINA_HOME=/usr/local/jakarta-tomcat-4
JAVA_HOME=/usr/java
export CATALINA_HOME JAVA_HOME
```

The beginning of your file should resemble the following extract:

```
#!/bin/sh
# -----
# Stop script for the CATALINA Server
#
# $Id: shutdown.sh,v 1.1.4.1 2002/01/30 18:10:40 patl Exp $
# -----

CATALINA_HOME=/usr/local/jakarta-tomcat-4

JAVA_HOME=/usr/java

export CATALINA_HOME JAVA_HOME
```

NOTE: The environment variables CATALINA_HOME and JAVA_HOME are added here for convenience and are not required. However, they should be defined in your shell's environment before you attempt to start or stop Tomcat. Place them in the scripts for ease of use.

- 3 Open the file `/usr/local/jakarta-tomcat/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 has a single `<Host >` tag for the default host.
- 4 Within this tag add the following element:

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

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

Testing the Tomcat Web Server Installation

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 own deployment.

To test the Tomcat Web server installation

- 1 Make sure that you are logged in as the user that all Analytics processes are supposed to run under, in this case, `sa`.
- 2 Start the Tomcat server by executing the following command:

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

- 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://saw.siebel.com:8080/analytics
```

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

NOTE: The port number (in this example it is 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.

A Note on Dashboard Access from Siebel Analytics Applications

If you installed a Siebel Analytics application, the Siebel Analytics dashboards is accessible only through the Siebel eBusiness application interface. [Chapter 10, “Siebel Industry Applications Analytics Metadata,”](#) describes the configuration necessary for the Siebel Analytics dashboards to be accessible from views in the Siebel eBusiness application.

To access the Analytics dashboard from outside the Siebel eBusiness application

- 1 In the \$INSTALL_DIR/SiebelAnalytics/Web/Servlet/Res/CustomMessages directory, look for the file named Siebel7Messages.xml.
- 2 Remove the file from this directory.
- 3 Restart the Web server.

Tools for Setting Up Basic Siebel Analytics Server Settings

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

Tools for the Standard Shell

These are the scripts for the standard shell.

- sa-init.sh

Sets up basic Siebel Analytics Server settings. Run this to keep registry settings up to date after you make any changes to .reg files with regedit. This includes changes to registry files used by the Siebel Analytics Web (for example, when you change the Web Catalog path).

- sa.sh

Sets up the environment for manual management. Run this under the current shell (source the script). Under this mode, you can run the Siebel Analytics Server manually.

- sa-cli.sh
Sets up the environment for running the Siebel Analytics Client. Run this under the current shell (source the script). If you are managing the server manually, you need to open a separate session to do this.
- user.sh
Sets up user-specific items, such as the database. You do not need to run this script separately. It is called from sa.sh.
- run-sa.sh
An automatic tool that calls sa.sh and starts the Siebel Analytics Server.
- sa-webinit.sh
Sets up the Siebel Analytics Web client environment. This is described in [“To install on Apache Tomcat \(stand-alone\)” on page 109](#).

Tools for the C Shell

These are the scripts for the C shell.

- sa-init.csh
Sets up basic Siebel Analytics Server settings. Run this to keep registry settings up to date after you make any changes to .reg files with regedit. This includes changes to registry files used by the Siebel Analytics Web (for example, when you change the Web Catalog path).
- sa.csh
Sets up the environment for manual management. Run this under the current shell (source the script). Under this mode, you can run the Siebel Analytics Server manually.
- sa-cli.csh
Sets up the environment for running the Siebel Analytics Client. Run this under the current shell (source the script). If you are managing the server manually, you need to open a separate session to do this.

- `user.csh`

Sets up user-specific items such as the database. You do not need to run this script separately. It is called from `sa.csh`.
- `run-sa.csh`

An automatic tool that calls `sa.csh` and starts the Siebel Analytics Server.
- `run-sa.csh stop`

Stops the Siebel Analytics Server
- `sa-webinit.csh`

Sets up the Siebel Analytics Web client environment. This is described in [“Installing on Apache Tomcat Stand-Alone” on page 109](#).

Additional Tools for Stopping the Siebel Analytics Server

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

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

If you are using telnet after setting up `DISPLAY`, use the utility `mwcleanup` for one of the following reasons:

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

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

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

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

```
nqsshutdown.exe -uAdministrator
```

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

NOTE: Siebel Analytics Server processes are dependent on the `rpcss.secure` process to run for a short time and call the `mwrpcss` process at Siebel Analytics Server startup.

A Note on Executable Files

The `$INSTALLDIR\SiebelAnalytics\Bin` directory contains all of the executable files invoked by Siebel Analytics Server components, as well as some utilities that are described in Siebel Analytics Server Administration Guide. It also contains some command-line utilities, listed below, that are provided for debugging purposes. For example, `nQcmd.exe` can be used for automated regression testing, `nQUDMLGen.exe` can generate UDML text from a repository, and `nQUDMLExec.exe` can generate a repository from UDML text and remove inconsistent or faulty UDML in the process.

CAUTION: It is recommended that you contact Siebel Technical Support before using any of the utilities listed below. Some can create damage if not used properly. For example, `nQUDMLGen.exe` may completely decompile and recompile the Analytics repository. The repository may be rendered unstable, unusable, or inconsistent. Use these utilities with caution.

- `nQcmd.exe`
- `nQQueryStatsFormatter.exe`
- `NQChangePassword.exe`
- `nQScheduler.exe`
- `nQSComGateway.exe`
- `nQSDBGatewayServer.exe`
- `nQSecUDMLGen.exe`

- nQSServer.exe
- nQUDMLCli.exe
- nQUDMLExec.exe
- nQUDMLGen.exe
- SchConfig.exe
- SchShutdown.exe

Inserting Your Siebel Analytics Web License Keys

Siebel Systems provides a license key file, AnalyticsWebLicense.xml, and license keys for the Siebel Analytics Web components a customer has licensed. When you have completed the installation, you must edit this file to insert your license keys, then save the file in the /Web/Config subdirectory in the data directory on machines running Siebel Analytics Web components. The default name of the data directory is \$INSTALLDIR/Data.

Server and Web Configuration Options

This section provides information about the configuration options for the Siebel Analytics Server and Siebel Analytics Web.

Configuration Options for the Siebel Analytics Server

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

To edit the *NQSConfig.INI* initialization file

- Use a text editor to edit this file.

These are examples:

```
vi $NQSConfig.INI  
  
textedit $NQSConfig.INI
```

For information about the initialization parameters, see [Chapter 4, “NQSConfig.INI File Reference.”](#) The examples in the chapter assume you are editing a Windows version of this file, so make the necessary substitutions in terms of UNIX file system paths and conventions.

Configuration Options for Siebel Analytics Web

Several Siebel Analytics Web registry entries 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 registry entries to control a variety of Siebel Analytics Web configuration characteristics.

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

Installing the Siebel Analytics Web Catalog

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

The SiebelAnalytics.webcat is installed automatically into the SiebelAnalyticsData\Web\Catalog\ folder when you install an integrated version from the Apps_Windows or Apps_UNIX folders.

Upgrading Your Previous Siebel Analytics Web Catalog

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

Troubleshooting the Siebel Analytics Installation on UNIX

This section details 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 9](#).

For some components, such as PopChart Image Server, that are installed on Windows platforms only, see also “[Troubleshooting the Siebel Analytics Installation on Windows](#)” on page 69.

Table 9. Common Problems and Solutions During Installation on 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 NQConfig.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 Settings for Japanese Localizations on AIX. ” |

Table 9. Common Problems and Solutions During Installation on UNIX

| Symptom/Error Message | Diagnostic Steps/Cause | Solution |
|--|--|--|
| Charts do not appear in Delivers and running iBots appear to hang. | Conda PopChart Image Server (PCIS) has not been configured properly. | <p>Make sure that PCIS is running.</p> <p>Make sure that the port PCIS is listening on (the PORT environment variable in the file pcis.settings) matches the port Analytics Web thinks PCIS is listening on. Refer to the registry entry HKEY_LOCAL_MACHINE\Software\Siebel Systems, Inc.\Siebel Analytics\Web\n.n\Charts\POP\ServerPre fix.</p> <p>Make sure that other PCIS configuration steps have been completed properly; for example, the entry in the paths.xml file is correct.</p> <p>Make sure that the Web or application server's name is valid and accessible from the user's browser.</p> |
| Attempting to access Analytics Web results in the java.lang.UnsatisfiedLinkError | Usually, this means that the environment for the Web server process does not include the directory for Analytics Web native libraries in its library path. | <p>Make sure that the directory INSTALLDIR/Web/Bin is in the library path environment variable (LD_LIBRARY_PATH on Solaris, LIBPATH on AIX and SHLIB_PATH on HP-UX).</p> <p>If using Tomcat, make sure that the syntax for sourcing the Analytics Web initialization script (\$INSTALLDIR/setup/sa-webinit.sh) is exactly as detailed in the installation instructions.</p> <p>If using Sun ONE, make sure that all Web server processes were shut down and that you started the Web server using the sa-web.sh script from the command line.</p> |

Table 9. Common Problems and Solutions During Installation on UNIX

| Symptom/Error Message | Diagnostic Steps/Cause | Solution |
|--|---|--|
| Attempting to access Analytics Web results in the javax.servlet.ServletException: Cannot create the server: Does the catalog you are using have read/write permissions for the user you are running as? (nqw:GOTNNXLK line 151 of WebServletWrapper.cpp) | If the Web server did not startup or shutdown properly on previous attempts it is possible that the Web Catalog's version record may have been corrupted. A failure to read this file would result in the observed error. | <ol style="list-style-type: none"> 1 Locate the directory where your Web Catalog is saved. By default this is \$INSTALLDIR/Data/Web/Catalog. 2 Make a complete backup of all files in this directory to minimize loss of work. 3 Assuming that your catalog is named SiebelAnalytics.webcat, locate the most recently modified file named SiebelAnalytics.webcat.xx.autosave, and replace the file SiebelAnalytics.webcat with this file. 4 Delete the file named SiebelAnalytics.webcat.version. 5 Try to start Analytics Web. If you still encounter the same error, then replace the SiebelAnalytics.webcat file with the next most current .autosave file. |
| 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. | Stop the process nqscmgateway.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. |
| When starting the Scheduler, you receive an error. | Set the DISPLAY variable for Scheduler. | <ul style="list-style-type: none"> ■ For Korn, Bourne, or bash shells: export DISPLAY=ip_address:0 ■ For C shell: setenv DISPLAY=ip_address:0 |

Table 9. Common Problems and Solutions During Installation on UNIX

| Symptom/Error Message | Diagnostic Steps/Cause | Solution |
|---|--|--|
| No Login Screen — No Errors | Incorrect configuration or incomplete shutdown/memory allocation. | <ul style="list-style-type: none"> ■ Make sure that Web server is running. ■ Make sure that the empty.htm file in the installed virtual directory can be accessed from a browser. If this fails, the virtual directory path is incorrectly defined. ■ Shutting down the server and Web server usually requires that the script mwcleanup be executed prior to restarting. |
| No login Screen — Web server errors | Conflicting ports used | Make sure that the Analytics Web does not use the same port numbers as existing software (for example, accidentally picking the same port number as an existing Web server). |
| No Login Screen — Analytics Server restarted | Analytics Web lost connection to the Analytics Server | Ideally, Analytics Web should be shut down prior to the server and restarted after the Siebel Analytics Server has been restarted. |
| 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. | <p>Make sure that the Siebel Analytics virtual Web server is correctly configured. Reconfigure the Siebel Analytics Web Server parameter as:</p> <p>http:// < host:port > /CUSTOM/saw.dll, where CUSTOM is the custom path specified in web-apps.xml.</p> <p>See “Configuring a Custom Name for a Virtual Web Server” on page 102.</p> |
| 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. | <p>Set up a Web server scratch directory.</p> <p>See “Testing the Tomcat Web Server Installation” on page 111.</p> |

Installing the Siebel Analytics Cluster Server Feature

3

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

- [“About the Siebel Analytics Cluster Controller Setup”](#)
- [“Other Installation Requirements for the Cluster Server Feature” on page 126](#)
- [“Process of Installing the Clustering Feature” on page 126](#)

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

About the Siebel Analytics Cluster Controller Setup

Figure 1 shows a typical small cluster server setup.

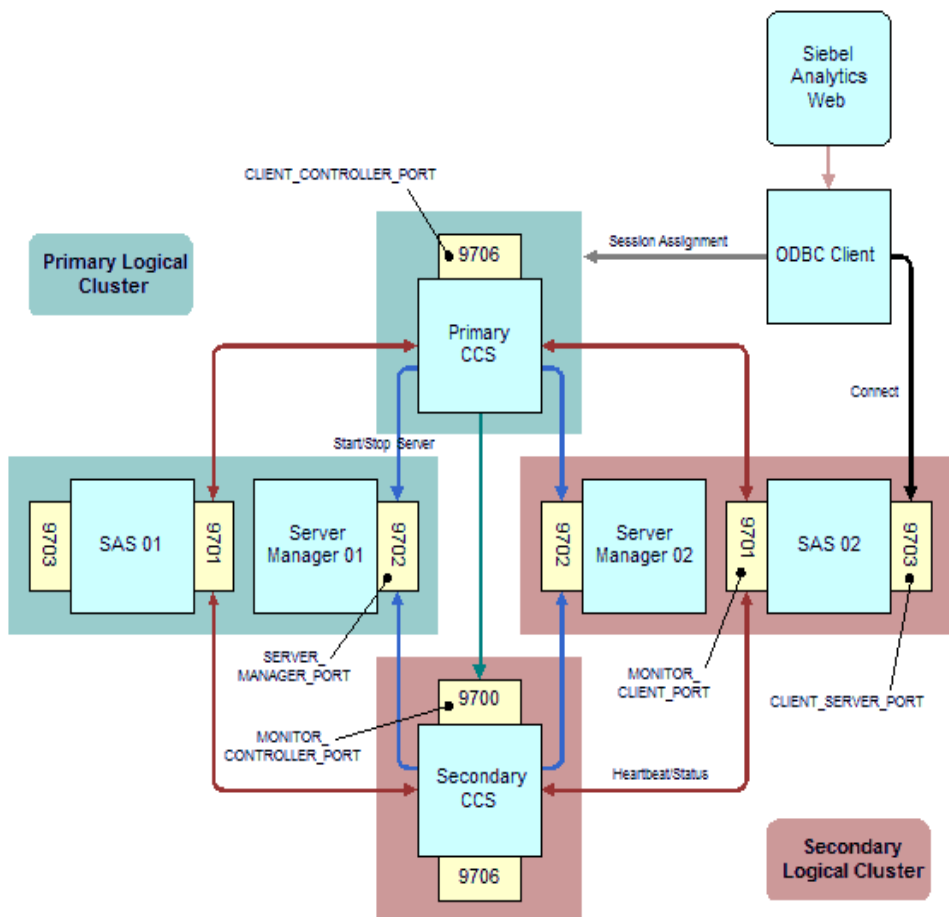


Figure 1. A Typical Cluster Controller Server/Client Setup

As [Figure 1](#) shows, a small cluster consists of the following components:

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

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

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

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

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

Other Installation Requirements for the Cluster Server Feature

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

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

To keep the server clocks in sync:

- On Windows, use a software synchronization program.
- On UNIX, use a time daemon such as NTP.

Process of Installing the Clustering Feature

In the Windows environment, you install the Siebel Analytics Cluster Server feature by performing the following tasks:

- [“Identifying the Clustering Components” on page 127](#)
- [“Granting the Log On as a Service Right” on page 129](#)
- [“Installing the Siebel Analytics Cluster” on page 130](#)

- [“Configuring Clustered Servers and Cluster Controllers” on page 131](#)
- [“Configuring Client Computers for Clustering” on page 134](#)

Identifying the Clustering Components

This task is part of the [“Process of Installing the Clustering Feature.”](#)

A machine can host one Siebel Analytics Server, one cluster controller, or one of each. The machines acting as the primary and secondary cluster controllers need to be on the same subnet as the other machines in the cluster. These machines monitor the operational configuration of the servers in the cluster and assign session requests within the cluster.

To identify the clustering components

- 1** Identify the computer that hosts the primary Cluster Controller and, optionally, which computer hosts the secondary Cluster Controller.

See the parameters [“PRIMARY_CONTROLLER”](#) and [“SECONDARY_CONTROLLER”](#) in [Chapter 5, “NQClusterConfig.INI File Reference.”](#)

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

See the parameter [“SERVERS”](#) in [Chapter 5, “NQClusterConfig.INI File Reference.”](#)

- 3** Identify a Domain account under which all clustered Siebel Analytics Servers and Cluster Controllers runs.

The Domain account must have the following characteristics:

- Membership in the local Windows Administrators group on each computer in the cluster.

NOTE: Do not use the LocalSystem account.

- Read and write access to the repository publishing directory (specified in the parameter [“REPOSITORY_PUBLISHING_DIRECTORY”](#) in [Chapter 5, “NQClusterConfig.INI File Reference”](#)).

Installing the Siebel Analytics Cluster Server Feature

Process of Installing the Clustering Feature

- The Log On as a service right.

NOTE: Members of the Administrators group do *not* have this right by default. See the section [“Granting the Log On as a Service Right” on page 129](#).

Granting the Log On as a Service Right

This task is part of the “[Process of Installing the Clustering Feature.](#)”

The Domain account for the clustered Siebel Analytics Servers and Cluster Controllers must have the Log on as a service right explicitly granted on each computer, using one of the following procedures.

NOTE: The Siebel Analytics Web Server does not need the Log on as a service right. It can be run under a different account or domain, as long as the Web Server login has the appropriate privileges.

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

- 1** Choose Start > Programs > Administrative Tools (Common) > User Manager. This opens the User Manager window.
- 2** From the Policies menu, choose the option User Rights. This opens the User Rights Policy window.
- 3** Select the option Show Advanced User Rights and, from the drop-down list, select Log on as a service right. Click Add. This opens the Add Users and Groups window.
- 4** In the List Names From drop-down list, select the domain the account is in, and then click Show Users.
- 5** Locate the account in the list and click Add. The domain and account should be shown in the Add Names window.
- 6** Click OK to return to the User Rights Policy window, which shows the Log on as a service right, and the domain and account in the Grant To window.
- 7** Click OK to return to the User Manager window and close the window.

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

- 1** Choose Administrative Tools from the Control Panel and double-click Local Security Policy. This opens the Local Security Settings window.
- 2** Expand the Local Policies tree in the left pane and double-click User Rights Assignment.

- 3 Locate the Log on as a service right, double-click it to open the Local Security Policy Setting window, and click Add. This opens the Select Users, Computers, or Groups window.
- 4 From the Look In drop-down list, select the domain that the account is in. Locate the account in the Name list, highlight it, click Add, and click OK.
- 5 Click OK again to return to the Local Security Settings window. You should see that the Log on as a service right has been added to the account. Close this window.

Installing the Siebel Analytics Cluster

This task is part of the [“Process of Installing the Clustering Feature.”](#)

To install the clustering feature

- 1 On each computer that is to host a Siebel Analytics Cluster Controller, install the Siebel Analytics software.

Use the procedure in [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment.”](#)

In the Setup Type window, select the Custom option, and then select the Siebel Analytics Cluster feature. All other options are selected by default in this screen; you can deselect the options you do not want to install. For example, if this computer is to host a Cluster Controller only, the Cluster Controller feature is the only feature you need to install.

- 2 On each computer that is to host a Siebel Analytics Server, install the Siebel Analytics software.

Use the procedure in [Chapter 1, “Installing Siebel Analytics Software in the Windows Environment.”](#)

In the Setup Type window, you can select the Server option, the Complete option or the Custom option, depending on the Siebel Analytics components you want to install on that particular computer. For example, if a computer 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).

- 3 Complete the installation, and make sure to read the readme file when prompted.
- 4 Reboot the computer when prompted.

NOTE: Using the default configuration created by the installation process causes the Cluster Controllers to fail to start. This problem is addressed in [“Configuring Clustered Servers and Cluster Controllers” on page 131.](#)

- 5 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.

- 6 Install and configure any necessary back-end database access packages.
For example, sites using SQL Server need to configure SQL Server DSNs referenced by the repositories.

Configuring Clustered Servers and Cluster Controllers

This task is part of the [“Process of Installing the Clustering Feature.”](#)

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

To configure clustered servers and cluster controllers

- 1 Stop any Siebel Analytics Servers and Cluster Controllers that are running.

You can stop the Siebel Analytics Servers and Cluster Controllers from the Services control panel applet on each computer, or by using the net command from a Windows command window. For example:

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

- 2 Edit one copy of the NQClusterConfig.INI file.

- a** In the file you are editing, supply valid values for the clustering parameters.
 - Set the parameter “[CLUSTER_PARTICIPANT](#)” to Yes.
 - Uncomment and supply valid values for the parameters “[CLUSTER_PARTICIPANT](#)” and “[REPOSITORY_PUBLISHING_DIRECTORY](#).”
 - Make sure that the non-clustering parameters, such as those set in the Cache and Repository sections of the NQConfig.INI file, are substantially identical across all Siebel Analytics Servers in a cluster.
 - b** Save this version of the NQClusterConfig.INI file.
 - c** Copy this edited NQClusterConfig.INI file to the Config folders of each computer that hosts a Siebel Analytics Server or a Cluster Controller.

Make computer-specific changes where necessary.
- 3** Configure Siebel Analytics Server data source names (DSNs) for clustering.

Use the wizard described in *Siebel Analytics Server Administration Guide*.
- 4** Manually start all the Siebel Analytics Server and Siebel Analytics Cluster Server services in the cluster.

There are three ways to do this:

 - From the Services control panel applet on each computer.
 - Using the net command from a Windows command window. For example:

```
net start "Siebel Analytics Server"
net start "Siebel Analytics Cluster"
```
 - Use a third-party tool designed for remote service manipulation.
- 5** Using a text editor, examine the NQServer.log file and the NQCluster.log in the Log folders to verify that all computers started without errors and joined the operational cluster configuration successfully.

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.

- 6 Correct any errors noted in the log files, and start the computers again.

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

Configuring Client Computers for Clustering

This task is part of the [“Process of Installing the Clustering Feature.”](#)

Although much of client/server communication uses TCP/IP, the clustering feature does not—it uses DCOM. As a result, you need to configure client computers that use the Siebel Analytics Server and cluster controllers. The configuration uses an environment variable, NQUIRE_DCOM, which participates in a cluster.

Any client computer that accesses clustered servers must be configured by setting the NQUIRE_DCOM environment variable to 1 at the system level, then restarting the client computer. This action causes the PORT number value supplied in the DSN setup to be ignored.

NOTE: After setting the NQUIRE_DCOM environment variable on a client computer, that client can no longer access Siebel Analytics Servers that are not clustered.

The method of configuring clients of clustered servers is different for Windows 2000 and Windows NT.

To configure clustered server clients for Windows 2000

- 1** Navigate to Start > Settings > Control Panel > System.
- 2** Click the Advanced tab.
- 3** Click Environment Variables.
- 4** In the bottom panel (labeled System variables), click New.
- 5** Enter NQUIRE_DCOM in Variable Name box and 1 in Variable Value box.
- 6** Click OK.
- 7** Click OK in previous dialog.
- 8** Click OK button in second previous dialog.

To configure clustered server clients for Windows NT

- 1** Navigate to Start > Settings > Control Panel > System.
- 2** Click the Environment tab.
- 3** Scroll to the bottom of the System variables list, and click just past the last entry.
Make sure the Variable and Value boxes are blank.
- 4** Enter NQUIRE_DCOM in the Variable box and 1 in Value box.
- 5** Click Set.
- 6** Click Apply.
- 7** Click OK.

Installing the Siebel Analytics Cluster Server Feature

Process of Installing the Clustering Feature

The Siebel Analytics Server software uses an initialization file to set parameters upon startup. This initialization file, the NQSConfig.INI file, includes parameters to customize behavior based on the requirements of each individual installation. This chapter provides the rules for using the file, shows a sample file, and provides definitions and syntax for each parameter. The following sections are included:

- [“About the Siebel Analytics Configuration File” on page 137](#)
- [“Siebel Analytics Initialization File Parsing Rules” on page 138](#)
- [“Siebel Analytics Configuration File Parameters and Syntax” on page 139](#)

NOTE: For information about the clustering configuration file, see [Chapter 5, “NQClusterConfig.INI File Reference.”](#)

About the Siebel Analytics Configuration File

The NQSConfig.INI file is located in the subdirectory `$INSTALLDIR\Config`. 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 139](#). All parameter explanations are targeted towards the Windows environment.

Location of Siebel Analytics Initialization File

The initialization file is the NQSConfig.INI file. It resides in the Config subdirectory in the Siebel Analytics software installation directory. Do not change the name of the file or its location.

Adding Comments to the 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.

Siebel Analytics Initialization File Parsing Rules

The Siebel Analytics Server reads the initialization file each time it is started. If it detects a syntax error while loading, it logs the error to the NQServer.log file, located in the Log subdirectory in the Siebel Analytics software installation directory. There may also be a summary message in the system log relating to the error. You need to correct the error and start the Siebel Analytics Server again. Repeat this process until the server starts with no errors.

Rules for Siebel Analytics Configuration File Parameter Entries

Note the following about each parameter entry in the NQSConfig.INI file:

- Entries need to be within the section to which the parameter belongs (Repository, Cache, General, and so on).
- Each entry needs to be terminated with semi-colon (;).
- Any syntax errors may prevent the Siebel Analytics Server from starting. The errors are logged to the NQServer.log 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.

Siebel Analytics Configuration File Parameters and Syntax

This section lists the NQSConfig.INI file parameters and gives a brief description and any required syntax for each parameter. The parameters are 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 139](#)
- [“Parameters in the Configuration File Cache Section” on page 141](#)
- [“Parameters in the Configuration File General Section” on page 145](#)
- [“Parameters in the Configuration File Security Section” on page 155](#)
- [“Parameters in the Configuration File Server Section” on page 157](#)
- [“Parameters in the Configuration File Dynamic Library Section” on page 162](#)
- [“Parameters in the Configuration File User Log Section” on page 162](#)
- [“Parameters in the Configuration File Usage Tracking Section” on page 164](#)
- [“Parameters in the Configuration File Optimization Flags Section” on page 166](#)

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.

NQSConfig.INI File Reference

Siebel Analytics Configuration File Parameters and Syntax

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 OFF, caching is disabled. When set to ON, caching is enabled.

Example: ENABLE = OFF ;

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. 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 67](#). 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.

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 to be unique for each server defined as a cluster participant.

Example: METADATA_FILE = "d:\SiebelAnalytics\metadata_file.dat" ;

REPLACE_ALGORITHM

Specifies the algorithm used to replace existing entries in the cache. Currently, the only supported algorithm 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 ;

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 this section 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 `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.

The supported values for `LOCALE` and `SORT_ORDER_LOCALE` are shown in [Table 10](#).

Table 10. Supported Languages for LOCALE and SORT_ORDER_LOCALE

| Supported Language |
|---------------------|
| Chinese-simplified |
| Chinese-traditional |
| Czech |
| Danish |
| Dutch |
| English-USA |
| Finnish |
| French |
| German |

Table 10. Supported Languages for LOCALE and SORT_ORDER_LOCALE

| Supported Language |
|----------------------|
| Italian |
| Japanese |
| Korean |
| Portuguese |
| Portuguese-Brazilian |
| Spanish |
| Swedish |

The default is English-USA. You need to explicitly set the value of this parameter if you want to use a setting other than english-usa.

Example: `LOCALE = "english-usa" ;`

The language extensions for all supported languages are shown in [Table 11](#).

Table 11. Siebel Analytics Language Extensions For All Supported Languages

| Language Extension | Language |
|--------------------|----------|
| cs | Czech |
| da | Danish |
| de | German |
| en | English |
| es | Spanish |
| fi | Finnish |
| fr | French |
| it | Italian |
| ja | Japanese |

Table 11. Siebel Analytics Language Extensions For All Supported Languages

| Language Extension | Language |
|--------------------|-----------------------|
| 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*.

NOTE: These two-letter language extensions for Siebel Analytics, shown in *Siebel System Requirements and Supported Platforms for Siebel Analytics*, are not to be confused with the Siebel eBusiness Applications three-letter language codes shown in *Siebel System Requirements and Supported Platforms*.

SORT_ORDER_LOCALE

This parameter is used to help determine whether the Siebel Analytics Server can function-ship an ORDER BY clause (used in sorting) to a relational database.

In the Server Administration Tool, the Features table (from the Features tab of the Database dialog) 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 relational database and the Siebel Analytics Server sort data in the same way.

For the relational database and the Siebel Analytics Server to sort data the same way, they must be in agreement on these parameters:

- Base language (the LOCALE and SORT_ORDER_LOCAL parameters)

- Case considerations (the CASE_SENSITIVE_CHARACTER_COMPARISON parameter)
- Binary versus linguistic comparisons (the SORT_TYPE parameter)

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 equivalent settings in these areas match.

The default value for SORT_ORDER_LOCALE in both the Features table and in the NQSConfig.INI file is english-usa.

If the Siebel Analytics Server and the relational database sort data differently, the Features table entry SORT_ORDER_LOCALE for the relational database needs to be set to a different value than english-usa. Failure to do so can result in wrong answers when multi-database joins are used, or errors using the Union, Intersect and Except operators, which all rely on consistent sorting between the relational server and the Siebel Analytics Server.

Every database defined in the Physical Layer in the Siebel Analytics Server Administration Tool has a features table associated with it. If you want to override the default value in the Features table for a particular type of relational database, you need to do it for all occurrences of it in the Physical Layer.

Example: SORT_ORDER_LOCALE = "english-usa" ;

SORT_ORDER_LOCALE on UNIX Operating Systems

The Analytics Server sets the C-runtime locale during server startup. A value for the setting is specified via the SORT_ORDER_LOCALE entry in the NQSConfig.INI file. You should always enter a platform-independent name and the corresponding platform-specific name is used. Table 12 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).

NOTE: This table is valid for 7.5.3 and later releases.

Table 12. SORT_ORDER_LOCALE Settings on 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 |

Table 12. SORT_ORDER_LOCALE Settings on UNIX Platforms

| SORT_ORDER_LOCALE | Solaris | AIX | HP-UX |
|--------------------------|------------------|-------------|--------------|
| Korean | ko_KR.UTF-8 | KO_KR.UTF-8 | ko_KR.utf8 |
| Portuguese | pt_PT.UTF-8@euro | PT_PT.UTF-8 | univ.utf8 |

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

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

where xxx is the locale specified in the NQSConfig.INI file for the SORT_ORDER_LOCALE parameter.

The response to this error is to install the locale indicated in the table for the requested language.

The error can also occur with a Windows platform. For Windows, the fix is to add the corresponding language pack using the Regional Settings dialog.

SORT_TYPE

Specifies the type of sort to perform. The default value is BINARY. Binary sorts are faster than non-binary sorts.

Valid values are BINARY and DEFAULT. If you specify DEFAULT, a non-binary sort is performed; this yields better sort results for data that contains accented characters.

Example: SORT_TYPE = "BINARY" ;

CASE_SENSITIVE_CHARACTER_COMPARISON

Specifies whether the Siebel Analytics Server differentiates between uppercase and lowercase characters when performing comparison operations. Valid values are ON and OFF. When set to OFF, case is ignored. When set to ON, case is considered for comparisons. For binary sorts, case sensitivity for the server and for the relational database should set the same way.

Example: CASE_SENSITIVE_CHARACTER_COMPARISON = OFF ;

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 time of day is 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 67](#). 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 I/O load across the given disk drives.

SORT_MEMORY_SIZE

Specifies the maximum amount of memory to be used for each sort operation. Multiple operations can each use memory up to the value specified. The limit for SORT_MEMORY_SIZE is determined by the physical memory of the server machine and on the number of sort operations that might occur simultaneously. Specify KB for kilobytes, MB for megabytes, and no units for bytes. For more information, see the section [“How the SIZE Parameters Affect Siebel Analytics Performance”](#) on page 153.

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 section [“How the SIZE Parameters Affect Siebel Analytics Performance”](#) on page 153.

Example: SORT_BUFFER_INCREMENT_SIZE = 256 KB ;

VIRTUAL_TABLE_PAGE_SIZE

Specifies the size of a memory page for the Siebel Analytics Server internal processing. A higher value reduces I/O but increases memory usage, especially in a multi-user environment. For more information, see the section [“How the SIZE Parameters Affect Siebel Analytics Performance”](#) on page 153.

Example: VIRTUAL_TABLE_PAGE_SIZE = 128 KB ;

How the SIZE Parameters Affect Siebel Analytics Performance

This section explains the interrelationships among the SIZE parameters and how they affect the performance of Siebel Analytics.

■ SORT_MEMORY_SIZE and SORT_BUFFER_INCREMENT_SIZE

The size specified by SORT_MEMORY_SIZE sets the upper limit on how large the sorting buffer can be in the Siebel Analytics Server. If this limit is exceeded, data is sorted in allotments of the size set by SORT_MEMORY_SIZE and the sorted sets are merged together. For example, suppose SORT_MEMORY_SIZE is set to 4 MB and the size of the data to be sorted is 32 MB. The server performs the sort once per each 4 MB of data, for a total of eight sort operations, and then merges the results into a single result set. This technique allows the Siebel Analytics Server to sort data of indefinite size.

The merge process itself is generally not costly in terms of resources, but it does include a read and write of each result set in a temporary file. To reduce the time this takes, increase the SORT_MEMORY_SIZE. This parameter can be tuned over time by taking into consideration the data size of the query and the number of concurrent users.

■ SORT_BUFFER_INCREMENT_SIZE

This parameter defines the increment in which SORT_MEMORY_SIZE should be reached. For example, suppose SORT_MEMORY_SIZE is set to 4 MB and the data to be sorted is just one megabyte. As data is fed into the sort routine, the size of the sort buffer increases only by the increment size, rather than the full size allowed by SORT_MEMORY_SIZE. This mechanism allows the Siebel Analytics Server to sort smaller result sets efficiently without wasting memory.

■ VIRTUAL_TABLE_PAGE_SIZE

Several operations—sort, join, union and database fetch—can require memory resources beyond those available to the Siebel Analytics Server. To manage this condition, the server uses a virtual table management mechanism that provides a buffering scheme for processing these operations. When the amount of data exceeds the VIRTUAL_TABLE_PAGE_SIZE, the remaining data is buffered in a temporary file and placed in the virtual table as processing continues. This mechanism supports dynamic memory sizes and ensures that any row can be obtained dynamically for processing queries.

When VIRTUAL_TABLE_PAGE_SIZE is increased, I/O operations are reduced. Complex queries may use 20 to 30 virtual tables, while simple queries may not even require virtual tables. The default size of 128 KB is a reasonable size when one considers that the size for virtual paging in Windows NT is 64 KB. This parameter can be tuned depending on the number of concurrent users and the average query complexity. In general, setting the size higher than 256 KB does not yield a corresponding increase in throughput due to the 64 KB size limit of Windows NT system buffers, as each I/O still goes through the system buffers.

USE_LONG_MONTH_NAMES

This 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

This 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 ;

Parameters in the Configuration File Security Section

The security parameters specify default values for the Siebel Analytics Server security features. For more information about security, see the chapter on security in *Siebel Analytics Server Administration Guide*.

DEFAULT_PRIVILEGES

Specifies the values users and groups are assigned when they are initially created. Valid values are NONE and READ. The default value is READ.

Example: DEFAULT_PRIVILEGES = READ ;

PERFORM_OS_AUTHENTICATION

Specifies whether the Siebel Analytics Server uses Windows NT operating system authentication to authenticate the Siebel Analytics Server users. Valid values are YES and NO.

Example: PERFORM_OS_AUTHENTICATION = YES ;

AUTHENTICATION_TYPE

Specifies the type of authentication the Siebel Analytics Server uses to authenticate the Siebel Analytics Server users. Valid values are NQS, DATABASE, and BYPASS_NQS. The default authentication mechanism is NQS.

- If you select NQS, then the authentication is done by the Siebel Analytics Server.

NOTE: For Siebel Analytics applications, the Siebel Analytics Server can be set up to authenticate using Microsoft ADSI, an LDAP server, or a database.

- If you select DATABASE, specify the database name in the Physical Layer of the repository to be used for database authentication. The first connection pool for this database is used for authentication. When the user logs 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.

- If you select BYPASS_NQS, users are authenticated against the database to which their 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" ;

PROJECT_INACCESSIBLE_COLUMN_AS_NULL

The flag PROJECT_INACCESSIBLE_COLUMN_AS_NULL must be set to TRUE to enable the SQL command CHOOSE.

The SQL command

```
CHOOSE(expr1, expr2, .... exprn)
```

selects the first valid expression from a list of expressions. A valid expression here is an expression in which all referenced columns are accessible by the current query user.

Parameters in the Configuration File Server Section

The parameters in the Server section define defaults and limits for the Siebel Analytics Server.

SERVER_NAME

A logical name identifying the Siebel Analytics Server.

Example: `SERVER_NAME = Siebel_Analytics_Server ;`

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 100 should be sufficient for most environments, but this parameter should be tuned based on the application environment and the client tools in use.

Example: `MAX_REQUEST_PER_SESSION_LIMIT = 500 ;`

SERVER_THREAD_RANGE

For each Siebel Analytics Server request, this specifies configuration information for thread allocation. The lower bound of the range specifies the number of threads initially allocated, and the upper bound of the range specifies the maximum number of threads to be allocated. The thread pool grows and shrinks in 5 thread increments until the upper or lower bound is reached. If there are fewer threads than sessions, sessions 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 the Siebel Analytics Server COM Gateway thread. The default of 0 sets the stack size as 1 MB in Windows NT.

Example: `DB_GATEWAY_THREAD_STACK_SIZE = 0 KB ;`

MAX_EXPANDED_SUBQUERY_PREDICATES

This controls the maximum number of values that may be in an IN value list populated by a subquery. The default is 8,192 values.

Example: `MAX_EXPANDED_SUBQUERY_PREDICATES = 8192 ;`

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 = 10240 ;`

MAX_DRILLDOWN_INFO_CACHE_ENTRIES

Controls the number of cached Action Link information entries per repository. This increases the speed of computing Action Link information by caching the Action Link information for the most recently used queries.

Example: MAX_DRILLDOWN_INFO_CACHE_ENTRIES = 10240 ;

MAX_DRILLDOWN_QUERY_CACHE_ENTRIES

Controls the number of cached Action Link query entries per repository. This increases the speed of drilling down by caching the Action Link results for the most recently used queries.

Example: MAX_DRILLDOWN_QUERY_CACHE_ENTRIES = 10240 ;

INIT_BLOCK_CACHE_ENTRIES

Controls the number of initialization block result sets that are cached with respect to row-wise initialization. The cache key is the fully instantiated initialization block SQL. The default value is 20. Because this parameter affects internal operations for localized versions of the Siebel Analytics software, we recommend that you do not change this value unless instructed to do so.

Example: INIT_BLOCK_CACHE_ENTRIES = 20 ;

CLIENT_MGMT_THREADS_MAX

This specifies the number of management threads to allocate for managing Siebel Analytics Server client/server communications. The default value of 5 is sufficient for server communications with the Server Administration Tool and when Siebel Analytics Web is the only main client process.

Each client process consumes a management thread. If you plan to run multiple Analytics Web client instances or multiple third-party client instances, increase the number of management threads to match the number of client instances. If the number of running client instances exceeds the number of management threads allocated, worker threads are consumed.

Example: CLIENT_MGMT_THREADS_MAX = 10 ;

RPC_SERVICE_OR_PORT

This specifies the Remote Procedure Call (RPC) Service or TCP/IP port the Siebel Analytics Server should use for client/server communications. The default is 9703.

When using the Analytics ODBC Wizard to set up ODBC data sources for the Siebel Analytics Server, the port number specified in the Port field on the Enter Logon Information screen should match the port number specified here. If you change the port number in the configuration file, remember to reconfigure any affected ODBC data sources to use the new port number.

Example: `RPC_SERVICE_OR_PORT = 703 ;`

ENABLE_DB_HINTS

This 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

This parameter controls the behavior for when a division by zero occurs. If set to YES, then a NULL value is returned. If set to NO, then the query is terminated and an appropriate error is returned to the user.

CLUSTER_PARTICIPANT

Specifies whether the Siebel Analytics Server that is using this configuration file is a member of a Siebel Analytics Server cluster. Valid values are YES and NO. The default value is NO.

If the server is to be a member of a Siebel Analytics Server cluster, uncomment the parameters [“REPOSITORY_PUBLISHING_DIRECTORY”](#) and [“REQUIRE_PUBLISHING_DIRECTORY,”](#) and supply valid values for them.

NOTE: When CLUSTER_PARTICIPANT is set to YES, this server needs to have a valid, configured NQClusterConfig.INI file in the Config subdirectory, located in the Siebel Analytics software installation directory. For more information, see [Chapter 5, “NQClusterConfig.INI File Reference.”](#)

Example: `CLUSTER_PARTICIPANT = YES ;`

REPOSITORY_PUBLISHING_DIRECTORY

When the parameter CLUSTER_PARTICIPANT is set to YES, this specifies the location of the repository publishing directory shared by all Siebel Analytics Servers participating in the cluster. There is no default value for this parameter.

When a repository is updated in online mode, it is published to this location. All clustered servers 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 entry is required on every Siebel Analytics Server that is to participate in the cluster. The Siebel Analytics Server designated as the master server for online repository changes (from the parameter “[MASTER_SERVER](#)” on page 172 in the NQClusterConfig.INI file) needs to have read and write access to this directory. The Siebel Analytics Servers in the cluster (from the parameter “[SERVERS](#)” on page 171 in the NQClusterConfig.INI file) need to have read and write access to this directory as well. All entries need to reference the same actual directory, although different names can be specified to accommodate differences in drive mappings.

These are examples:

```
REPOSITORY_PUBLISHING_DIRECTORY = "z:\SiebelAnalytics\Publish";
REPOSITORY_PUBLISHING_DIRECTORY = "\\ClusterSrv\Publish";
```

REQUIRE_PUBLISHING_DIRECTORY

When the parameter CLUSTER_PARTICIPANT is set to YES, this specifies that the repository publishing directory (from the parameter REPOSITORY_PUBLISHING_DIRECTORY) needs to be available in order for this Siebel Analytics Server to start up and join the cluster. The default value is YES. When set to YES, if the publishing directory is not available at startup or if an error is encountered while the server is reading any of the files in the directory, an error message 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 are 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 ;

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:

- ON, OFF

ON and YES specify the function is enabled.

- YES, NO

OFF and NO specify the function is disabled.

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 ;`

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 67](#). 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).

NOTE: The recommended setting for this parameter is 30.

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 = 30 ;

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, `STRONG_DATETIME_TYPE_CHECKING`. It is a special parameter used to override the behavior of the Siebel Analytics Server in certain situations.

STRONG_DATETIME_TYPE_CHECKING

Use this parameter to relax strong type checking to prevent some date/time data type incompatibilities in queries from being rejected. For example, a query of the form “datetime op string-literal” technically contains a 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. The query could still fail, for example, if the relational database implements a similar strong type checking.

Example: `STRONG_DATETIME_TYPE_CHECKING=ON ;`

The Siebel Analytics Server software uses an initialization file to set cluster configuration parameters upon startup for the Siebel Analytics Cluster Server feature. This initialization file, the NQClusterConfig.INI file, includes parameters to customize behavior based on the requirements of each individual installation. This chapter provides the rules for using the file and provides definitions and syntax for each parameter. The following sections are included:

- [“About the Siebel Analytics Cluster Configuration File” on page 167](#)
- [“Parameter and Syntax Descriptions in the Siebel Analytics Configuration File Cluster Section” on page 170](#)

About the Siebel Analytics Cluster Configuration File

The Siebel Analytics Server reads the NQClusterConfig.INI file after it reads the NQConfig.INI file (when [“CLUSTER_PARTICIPANT” on page 160](#) is set to YES in the NQConfig.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.

For information about the NQConfig.INI file, see [Chapter 4, “NQConfig.INI File Reference.”](#)

Siebel Analytics Cluster Configuration File Location

The cluster configuration initialization is the NQClusterConfig.INI file. It resides in the subdirectory `$INSTALLDIR/Config`. Do not change the name of the file or its location. All Siebel Analytics Servers and Cluster Controllers that are to participate in the cluster need to have configured NQClusterConfig.INI files.

NOTE: The Siebel Analytics Server administrator needs to make sure that a configured NQClusterConfig.INI file resides in the Config subdirectory of every Siebel Analytics Server and Cluster Controller that is to participate in the cluster. In general, it is easiest to configure the file once, copy it to the Config directories of the machines in the cluster, and then make machine-specific changes when required. If you correct an error, make sure the correction is propagated to the NQClusterConfig.INI files of all affected machines.

Adding Comments to the 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.

Rules for Siebel Analytics Cluster Configuration File Parameters

Note the following about each parameter entry in the NQClusterConfig.INI file:

- Entries need to be within the Cluster section and contained within the NQClusterConfig.INI file. Do not add the Cluster section to the NQConfig.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 Siebel Analytics Cluster Configuration File Parameter Entries

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 take effect then.

Parameter and Syntax Descriptions in the Siebel Analytics Configuration File Cluster Section

The parameters in the Cluster section provide configuration information for the Siebel Analytics Cluster Server feature. The NQClusterConfig.INI file parameters are described in this section. 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 non-key, non-reserved words, or alphanumeric characters.

Example: PRIMARY_CONTROLLER = SERVER01 ;

SECONDARY_CONTROLLER

Identifies the machine acting as the secondary cluster controller. This is the computer that 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 continue to operate.

Specify the machine name of the computer that is to be the secondary cluster controller. This needs to be the NetBIOS name (computer name) of the machine. Double or single quotes are not required if the value consists of only non-key, non-reserved words, or alphanumeric characters. Do not specify the same machine name as that used in the PRIMARY_CONTROLLER parameter.

Example: SECONDARY_CONTROLLER = SERVER02 ;

SERVERS

Identifies the Siebel Analytics Servers that 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 160 in Chapter 4, [“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 ;`

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.
- Do not specify the same port number as that specified for the `SERVER_PORT` (described below).

Example: `CONTROLLER_PORT = 9700 ;`

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.
- Do not specify the same port number as that specified for the `CONTROLLER_PORT` (described above).

Example: `SERVER_PORT= 9701 ;`

The Siebel Analytics product has two major configurations:

- Siebel Analytics Applications

In this environment the Siebel Analytics Server uses the SiebelAnalytics.rpd and connects to the prebuilt Siebel Data Warehouse. Additionally, customers access Analytics through a Siebel eBusiness application such as Siebel Sales.

Other data sources may be used, provided you have purchased the appropriate licenses from Siebel Systems. For more information, please contact your Sales representative at Siebel Systems.

If you have purchased Siebel Analytics applications, you should configure the Analytics applications repository for your environment as explained in this chapter and the following chapters.

- Stand-Alone Siebel Analytics

The stand-alone mode is for use with customer-built repositories, and the Siebel Analytics Server is configured to run against in-house data warehouses. If you are a Stand-Alone Siebel Analytics customer, the following sections are not applicable to your environment.

Siebel Analytics Applications Installation Overview

Before installing Siebel Analytics, you should have installed your Siebel operational application. For example, before installing Siebel Sales Analytics, you should have installed Siebel Sales.

If you are upgrading from an earlier version of Siebel Analytics, use the flow diagram in [Figure 2](#). Otherwise, proceed to [Chapter 7, “Accessing Analytics Through Siebel Applications.”](#)

Upgrading from Previous Versions of Siebel Data Warehouse

Figure 2 shows the steps required to upgrade from previous versions, or to install for the first time. Table 13 further describes the steps in Figure 2.

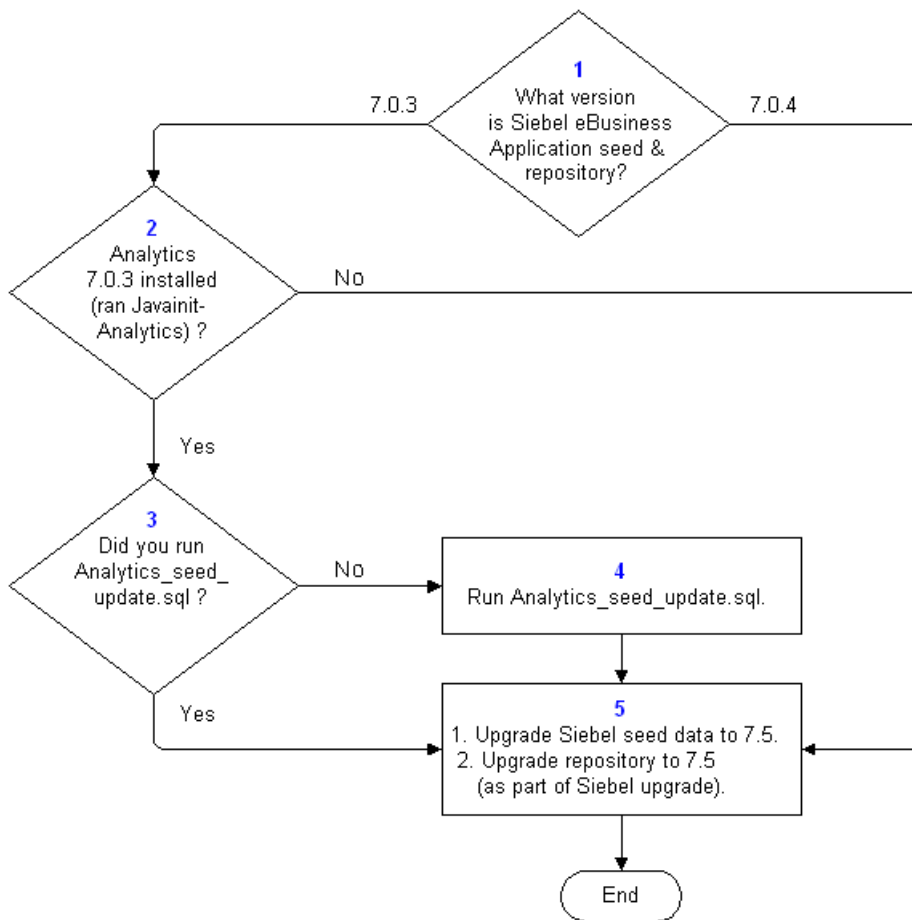


Figure 2. Upgrade Process For Siebel Analytics or New Siebel Analytics Installation

Table 13. Notes on Figure 1

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

Updating Seed Data

This process is required for customers of Siebel Analytics version 7.0.3 who are upgrading to version 7.5 by way of version 7.0.4.

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

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

To update Siebel Analytics 7.0.3 seed data

- 1 Open a command line interface and enter the following command.
- 2 Replace all variables (names that start with a \$) with your installation-specific information shown in [Table 14](#).

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

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

Table 14. Variables for Updating Seeds

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

Upgrading Older Repositories in UNIX

If you have an older version of the Siebel Analytics Server running on UNIX, you must run the following upgrade steps, otherwise parts of the repository may be invalid when you upgrade to Siebel Analytics 7.5.

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

If you are running on 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 in UNIX

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

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

- 3 Convert the text back to repository format.

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

- 4 FTP the repository back to the UNIX machine.

Using an Older Repository While Upgrading the Siebel Analytics Platform

You can upgrade to a newer version of the Siebel Analytics platform, while keeping your current version of the Siebel operational application.

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. For example, to use the Siebel Analytics version 7.5 repository and Web catalog in an integrated environment, the Siebel operational application repository must also be version 7.5, but the Siebel Analytics software can be version 7.7.

The process for using an older repository with a newer version of Siebel Analytics is described in Siebel FAQ (Frequently Asked Questions) 2032 on SupportWeb.

Accessing Optional Analytics Applications

Depending on the options you purchased with your Siebel eBusiness application, you must perform additional steps in order to access the corresponding Analytics options. [Table 15](#) shows the additional options for Siebel Analytics.

Table 15. 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 Analytics options

- 1 Log in to Siebel Analytics as Administrator.
- 2 Navigate to Answers > Analytics Web Administration and go to Manage Web Groups & Users.
- 3 Locate the Web Group corresponding to your option. The Web Group options are:
 - No Forecasting
 - No Forecasting Lite
 - No Universal Queuing
 - No Email Response
 - No Service Agreements
 - No Partner Marketing
 - No Partner ERM

- No Partner ISS
- 4** Click on the Edit icon.
 - 5** Under the Group Membership section, click the delete icon (X) to delete Analytics Users from this group.
 - 6** Click Finished and log out of the application.
 - 7** Log in again to access the additional optional dashboards and reports.

Siebel Analytics Applications Overview

Siebel Analytics Applications Installation Overview

Accessing Analytics Through Siebel Applications

7

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

Configuring the Siebel Analytics Server consists of:

- [“Changing the Preconfigured Database Connections” on page 184](#)
- [“Updating Initialization Blocks” on page 189](#)
- [“Creating a Dedicated Repository” on page 192](#)
- [“Configuring Siebel Analytics to Work with Siebel Web Extension” on page 194](#)
- [“Restarting the Servers” on page 198](#)
- [“Completing the Initialization in the Siebel eBusiness Application” on page 199](#)
- [“Using Analytics-to-Siebel eBusiness Application Action Links” on page 200](#)

Organizations with Siebel Analytics applications that have customized content in the Siebel Analytics repository (SiebelAnalytics.rpd) or in the Siebel Analytics Web Catalog (SiebelAnalytics.webcat), need to merge their customized content into the repository and Web Catalog that are distributed with this version. For information about merging content into the Siebel Analytics repository, see the section on the Merge utility in *Siebel Analytics Server Administration Guide*. For information about merging content into the Siebel Analytics Web Catalog, see the section on Analytics Catalog Manager in *Siebel Analytics Web Administration Guide*.

NOTE: Make all changes to the repository in Offline mode.

Overview of Analytics Applications Configuration Tasks

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

1 Configure the Analytics repository

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

- a** Change the database connection type for the data sources relevant to your Analytics operational applications.
- b** Change the default data source names (DSNs) and DSN user name to conform with your DSNs and DSN user name.
- c** Change the table owner to match the owner of your database environment for:
 - Siebel eBusiness Application database
 - Siebel Data Warehouse

2 Initialize the Analytics operational application

Change the operational application host name to the host name of the machine that runs Siebel Analytics Web.

Changing the Preconfigured Database Connections

The SiebelAnalytics.rpd application repository contains preconfigured database connections. By default the database type is IBM DB2 UDB V7. You have to reconfigure all the database connections appropriate to your environments. This includes changing the database types and updating the user names and passwords. A list of the connections is presented in [Table 17](#).

Changing the Default DSNs

The database DSNs and user names have been configured to use the specific static repository variables shown in [Table 16](#). The default values should be changed to conform with the database DSNs in your environments.

Table 16. 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, refer to *Siebel Analytics Server Administration Guide*.

To update the default DSN values

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

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

Changing the Database Type

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

To change the database type

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

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

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

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

- 2** In the Physical layer, double-click on a database connection to open the Database window.
- 3** In the General tab, use the Data Source Definition drop-down list to choose the database type.
After making the database type change, click OK.
- 4** In the list of databases, in the Physical Layer, expand the database to view the Connection Pool.

- 5 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.

The DSN name has been preconfigured to VALUEOF(OLAP_DSN) for the OLAP database and VALUEOF(OLTP_DSN) for the transactional 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 your environment.

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

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

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

- 7 Save the repository.
- 8 If you use AIX, HP-UX, or Solaris, copy the repository file to the AIX, HP-UX, or Solaris machine.

Connection Pools

Siebel Analytics uses multiple connection pools. In [“Changing the Database Type” on page 186](#), you configured these connection pools for your operational database. [Table 17](#) explains the purpose of some connection pools.

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

Table 17. Connection Pools

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

Table 17. Connection Pools

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

Updating 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 SQLs for each database in the Initialization blocks and Select tables, read the database packaging support in *Siebel Analytics Web Administration Guide*.

The SQLs 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 18](#) 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 18. Initialization Blocks and Their Purposes

| Initialization Block | Purpose |
|---------------------------|---|
| Authorization | Calculates user's responsibilities from the Siebel database. |
| Authentication | Authenticates against the Siebel database and verifies the user exists as a Siebel eBusiness application user. |
| External Metadata Strings | Gets the translated value of metadata strings for the user's locale. This initialization block is critical to Analytics Dashboards in international deployment. |
| LOCALE | Sets the user's locale specification in the Siebel Analytics Server. |

Table 18. Initialization Blocks and Their Purposes

| Initialization Block | Purpose |
|-----------------------------|---|
| 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 eBusiness application database. |
| Orgs for Org-based Security | Queries the Siebel eBusiness application database to get the organization membership for each user. It sets the variable ORGANIZATION. |
| Primary Owner ID | Sets the primary owner ID based on the user login ID. |
| Primary Position ID | Queries the Siebel eBusiness application database to set the variable 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 Siebel Analytics Server Administration Tool, navigate to Manage > Variables > Initialization Blocks. Right-click any initialization block and select Properties to view information about that block. For more information, see Siebel Analytics Server Administration Tool online help.

Stopping and Starting the Siebel Analytics Services When Importing a Repository

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

To stop the services before importing or copying a repository

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

To start the services before importing or copying a repository

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

Creating a Dedicated Repository

The repository shipped with this release (SiebelAnalytics.rpd) contains a large number of presentation layer subject areas. You are licensed to use only a subset of these subject areas, and the remaining material is unnecessary to your needs. The Siebel Analytics Server Administration Tool feature *Import from repository* is a way for you to reduce the size of the .rpd file. Anything not required by the subject areas you license is absent from the new, smaller repository you create. For example, if you are using only Service, all the Pharma subject area material is not imported. The relevant Analytics subject areas for Siebel eBusiness Applications and Siebel Industry Applications are listed in [Appendix A, “Customizing a Siebel Analytics Application.”](#)

Trimming the repository improves performance.

To import subject areas into a new, dedicated repository

- 1** Create a new, empty repository.

- 2** Choose File > Import from repository and point to the repository SiebelAnalytics.rpd.
- 3** From the Presentation layer, choose the subject areas that you licensed.
- 4** At the Objects to Update screen, choose the objects to be updated.

The drop down list at the top of the window shows you the categories of objects that you can update—Catalogs, Users, Groups and Variables. The left pane shows you the objects in the category you selected. To refresh the display, click the Refresh button.

- 5** In the left pane, select the objects within that category that you want to update.

You can select multiple objects by SHIFT-clicking to select adjacent objects, or CONTROL-clicking to select non-adjacent objects.

Depending on the category of object you selected, different buttons allow you to specify how you want objects added:

- When you choose the Catalogs category, the presentation catalogs are displayed in the left pane and the Add with Children button becomes active.
 - Click the Add with Children button to add the presentation catalogs to the right pane.

Presentation catalogs are always added with all their child objects. All associated objects, from the Presentation Layer to the Physical Layer, are updated or synchronized.

- When you choose the Groups category, you can:
 - Click the Add button to update or synchronize only the group.
 - Click the Add with Children button to update or synchronize the group and all the groups that are below it in the group hierarchy.
 - Click the Add with Parents button to update or synchronize the group and all groups that are above it in the group hierarchy. (You can view group hierarchies from the Security Manager.)
- When you choose the Variables category, the defined system and session variables are displayed in the left pane. You can:

- ❑ Click the Add button to update or synchronize only the variable.
 - ❑ Click the Add with Parents button to update or synchronize the variables and any parent variables on which they depend.
- 6** After you have selected the objects, click the appropriate button to add the object to the right pane.
- Objects in the right pane are the objects that 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.

Configuring Siebel Analytics to Work with Siebel Web Extension

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.

NOTE: 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 SWE), or using a router to do the mapping, or using load balancing software. Your company IT manager must determine the best mechanism to accomplish this routing given the topology used.

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. This section describes the steps necessary to do this. Configuring Siebel Analytics to work with Siebel Web Extension includes the following tasks:

- “Creating a Virtual IP Address for the Siebel Web Engine and Siebel Analytics Web” on page 195
- “Testing the Virtual IP Configuration for Siebel Analytics and the SWE” on page 196

Creating a Virtual IP Address for the Siebel Web Engine and Siebel Analytics Web

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. One 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, the following settings are true:

- SWE is load-balanced across *< machine1 >* :port 80 and *< machine2 >* : port 80.
- Siebel Analytics Web is running on *< machine3 >* :port 84.
- 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 >* , but to route requests like `http://siebel.company.com:84` to *< machine3 >* .

The following procedure gives the steps to set up the load-balancer or router used to do the virtual IP configuration.

To create a virtual IP address for Siebel Web Engine and Siebel Analytics Web

- 1** On the network, set up the load-balancer or router to direct requests from *< virtual domain >* to *< physical Siebel Web Server Extension machine >* , 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 the load-balancer or router to direct requests from *< virtual domain >* :84 to *< physical analytics web machine >* :84.

- 3 In the Siebel application, from the Siebel Administration screen, set the NQHost parameters for Siebel Analytics Symbolic URLs to point to the port < virtual domain > :84, instead of directly to the Siebel Analytics Web server physical machine.
- 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

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 Siebel Web Engine and Siebel Analytics Web”](#) on page 195.

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 Siebel Server to Work with Siebel Analytics ODBC on UNIX

This task is required if you want NQSODBC to be configured as the only data source of Siebel Server. It is necessary only for Siebel Analytics applications running on UNIX platforms.

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 folder.
- 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.

Restarting the Servers

For the changes to take effect, you must save the repository and restart the servers.

To restart the servers on Windows

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

NOTE: The Siebel Analytics Server takes about 10 minutes to start. In the Microsoft Windows environment, the Services Manager returns a false error indicating that it was unable to start the server. This is a known Microsoft Services Manager issue, which times out after 5 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.

- 2 In the ODBC Driver Manager, test that the DSN called Analytics_web (of type Siebel Analytics Server) connects to the Siebel Analytics Server. Use the username Administrator and the password SADMIN.

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

- 3 Restart the Web server. This may take several minutes.

To restart the servers on UNIX

- Stop the server, then start it again, using the commands listed in [Step 2 of “Running the Installer” on page 76](#).

Completing the Initialization in the Siebel eBusiness Application

After you have configured your Siebel Analytics Server and are able to access the dashboards, you need to update the Siebel eBusiness application to view Analytical dashboards from within the Siebel operational application.

To update the Siebel eBusiness application

- 1** Open your Siebel eBusiness 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 (for example, SMT4000ABCD).
 - In AIX or Solaris, change the host name from [AnalyticsServerName] to the name of the port.

The following is applicable only to UNIX: You may need to add the domain name suffix to the server name in order to make sure that drill-down links on the Siebel Analytics user interface work.

For example, `servername.siebel.com:8080`

- 6** Log out of the application and log back in.

Using Analytics-to-Siebel eBusiness Application Action Links

Siebel Analytics supports Action Links from an Analytics report to the relevant record in the Siebel eBusiness application.

NOTE: For this feature to work, the Web server component of Siebel Analytics should be running on the same physical machine as the Siebel Web Server Extension (SWSE).

About Siebel 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 sections are relevant to the configuration of your application for action links:

- [“Configuring Siebel Analytics to Work with Siebel Web Extension” on page 194](#)
- [“Creating a Virtual IP Address for the Siebel Web Engine and Siebel Analytics Web” on page 195](#)
- [“Testing the Virtual IP Configuration for Siebel Analytics and the SWE” on page 196](#)
- [“About Action Links to Siebel Views Containing Single Quotation Marks” on page 201](#)
- [“Testing Siebel Analytics Action Links” on page 201](#)

About Action Links to Siebel Views Containing Single Quotation Marks

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>
```

The solution to this problem is to use the escape character (or backslash) in JavaScript to reference the single quotation mark. For any single quotation mark, insert two back slashes before the quote, and the Siebel Web Engine 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

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.

Accessing Analytics Through Siebel Applications

Using Analytics-to-Siebel eBusiness Application Action Links

Siebel Analytics security is based on Responsibilities and Analytics Repository Groups. This chapter assumes you are familiar with *Security Guide for Siebel eBusiness Applications* (on *Siebel Bookshelf*), especially the User Authentication, Basic Access Control, and Data-level Security sections.

This chapter is organized as follows:

- [“Introduction to Security” on page 203](#)
- [“User Authentication” on page 205](#)
- [“Integrated Security for Responsibilities and Groups” on page 207](#)
- [“Analytics Applications Specific Security Groups” on page 221](#)

Introduction to Security

This section discusses security levels and authentication as they are used by Siebel Analytics.

Levels of Security

For Siebel Analytics, two different levels of security configuration are supported, Object Level Security and Data-level Security.

Object Level Security

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—Repository Groups” on page 211.](#)
- Web Catalog objects (Web client) security:
Controls access to dashboards, pages, folders and reports. See [“Metadata Object Level—Web Catalog Groups” on page 212.](#)

Data-Level Security

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 four types of data-level security:

- Primary position based:
Equivalent to the Siebel eBusiness 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.

- Team based:

This is the most complicated of security configuration and is not preconfigured in the metadata. However, the Data Warehouse tables to support this configuration are part of the schema. Organizations that wish to use this configuration must set up the metadata appropriately.

In this configuration, the user sees the records where the user is on the team for that record or all data that is accessible under the first three security level types. There is no equivalent Siebel operational application view for this security, and the data is a combination of data seen in multiple Siebel views.

User Authentication

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

- Database Authentication
- LDAP Server Authentication
- ADSI Authentication
 - Siebel Analytics Server supports Active Directory Services Interface (ADSI) for Authentication only.

The Siebel Analytics repository is preconfigured for database authentication. LDAP and ADSI authentication are described in the following sections.

Configuring LDAP Authentication

NOTE: If there is a LDAP server already, you do not need to create a new one.

If you use an LDAP server to authenticate your users, follow these steps.

To add the correct entries for your LDAP Server

- 1 Open the Siebel Analytics Administration tool.

- 2** Select Manage > Security > LDAP Servers.
- 3** Select Action > New > LDAP Server.
(See *Siebel Analytics Server Administration Guide*.)
- 4** Add the LDAP host server name.
- 5** Set Base DN to the user that is contained in the session variable. For example,
Base DN: ou = people,o = siebel.com
- 6** To test the connection, click the Test connection button.
- 7** Navigate to Authentication—Initialization Block.
- 8** Set Data Source Connection to LDAP.
- 9** In the LDAP Server box, select the correct LDAP Server and click OK.
- 10** Change Authorization and Login Properties to use OLTP Connection Pool, *not* DbAuth.

Configuring ADSI Authentication

If you use an ADSI server to authenticate your users, follow these steps.

To configure ADSI server authentication

- 1** Set the following environment variable:
SA_AUTHENTICATION_ADSI = [any text]
Under Windows, this can be done in Control Panel.
- 2** Reboot the machine.
- 3** Start the server.

Integrated Security for Responsibilities and 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 automatically is reflected in the repository as well as the Web Catalog. The user inherits the appropriate permissions from the responsibilities.

Responsibilities and Access

Permission and access are always determined by user's memberships in various responsibilities.

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

In this case, Responsibility is interchangeable with Repository group and Web Catalog group; they have a one-to-one correspondence.

There are two ways for a Siebel administrator to check a user's responsibility:

- In the Siebel operational application, go to the Responsibilities view.
- Go to the Analytics Web and click the My Account link.

The group membership for the user is shown near the bottom of the Web page.

When you add a new responsibility to a user in Analytics Web, the change is not immediately reflected in the Analytics environment. In order to register the new user responsibility, two things must happen:

- 1 The administrator must reload the Server metadata through Analytics Web.
- 2 Once the metadata is reloaded, the user must log out from the Siebel operational application, then log in again.

Siebel Analytics applications ship with certain preconfigured responsibilities. [Table 19](#) shows these preconfigured responsibilities. Some of the responsibilities are described in further detail in [Chapter 9, “Siebel eBusiness Applications Metadata,”](#) and in [Chapter 10, “Siebel Industry Applications Analytics Metadata.”](#)

Table 19. Siebel Analytics Applications Preconfigured Responsibilities

| Application | Responsibility |
|---------------------|--|
| Sales | Sales Analytics Administrator |
| | VP of Sales Analytics |
| | Sales Manager Analytics |
| | Sales Representative Analytics |
| Marketing | Marketing Analytics User |
| | Marketing Analytics Administrator |
| Interactive Selling | ISS Analytics User |
| | ISS Analytics Administrator |
| Service | Service Analytics VP |
| | Service Analytics Manager |
| | Service Analytics Administrator |
| | Service Analytics Service User |
| | Service Analytics Call Center User |
| | Service Analytics eMail User |
| Partner | Partner Service Rep Analytics User |
| | Partner Sales Rep Analytics User |
| | Partner Executive Analytics User |
| | Partner Operations Analytics User |
| | Partner Sales Manager Analytics User |
| | Partner Service Manager Analytics User |

Table 19. Siebel Analytics Applications Preconfigured Responsibilities

| Application | Responsibility |
|----------------------------------|--|
| | Channel Accounts Manager Analytics User |
| | Channel Executive Analytics User |
| | Channel Operations Analytics User |
| | Channel Marketing Manager Analytics User |
| Employee Relationship Management | ERM Analytics VP |
| | ERM Analytics Manager |
| | ERM Analytics HelpDesk Agent |
| | ERM Analytics HelpDesk |
| | ERM Analytics User |
| | ERM Analytics HR |
| | Executive Analytics User |
| | Executive Analytics Administrator |
| Communications, Media, & Energy | CM Marketing Analytics User |
| | CM Marketing Analytics Administrator |
| | CM Sales Analytics User |
| | CM Sales Analytics Administrator |
| | CM Service Analytics User |
| | CM Service Analytics Administrator |
| Financial Services | Finance Analytics User |
| | Insurance Analytics User |
| | Financial Services Analytics User |

Table 19. Siebel Analytics Applications Preconfigured Responsibilities

| Application | Responsibility |
|------------------------------|--------------------------------------|
| Consumer Goods | CS Analytics VP Sales |
| | CS Analytics Key Account Manager |
| | CG Sales Analytics User |
| | CG Sales Analytics Administrator |
| Life Sciences | LS Administrator |
| | PH US Sales Analytics User |
| | PH EMEA Sales Analytics User |
| | PH Sales Analytics Administrator |
| | PH US Marketing Analytics User |
| | PH EMEA Marketing Analytics User |
| | PH Marketing Analytics Administrator |
| | PH Mobile Analytics User |
| | PH Mobile Analytics Admin |
| | PH Medical Education Analytics User |
| | PH Medical Education Analytics Admin |
| | PH US Call Activity Analytics User |
| | PH EMEA Call Activity Analytics User |
| | PH Call Activity Analytics Admin |
| | PH US Executive Analytics User |
| | PH EMEA Executive Analytics User |
| PH Executive Analytics Admin | |

Table 19. Siebel Analytics Applications Preconfigured Responsibilities

| Application | Responsibility |
|-------------|------------------------------------|
| Automotive | AT Service Analytics User |
| | AT Service Analytics Administrator |
| | AT Sales Analytics User |
| | AT Sales Analytics Administrator |
| | AT Partner Analytics User |
| | AT Partner Analytics Administrator |

Metadata Object Level—Repository Groups

Metadata object security is configured in the Analytics repository (SiebelAnalytics.rpd) using the Analytics Administration Tool. “Everyone” is denied access to each of the subject areas. Each subject area is configured to give explicit read access to selected related responsibilities. This access can be extended to table and column level.

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

The exceptions to the explicit configuration rule are the Communications and Financial Analytics industry applications, where there are tables and columns specific to these two industries scattered throughout the general Siebel eBusiness 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 20](#).

Table 20. Repository Parent Groups

| Parent Group | Permissions Inherited by: |
|------------------|---|
| Finance | All Financial applications groups |
| Insurance | All Insurance applications groups |
| CM General | All Communications applications |
| Consumer Sector | Consumer Sector groups |
| Pharma | Life Sciences/Pharmaceuticals applications groups |
| Channel Managers | All eChannel applications groups |
| Partner Managers | All Partner application groups |

Metadata Object Level—Web Catalog Groups

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, refer to *Siebel Analytics Web Administration Guide*.

Implementing Catalog Security

Security on the Web Catalog has been preconfigured for the groups listed in [Table 20](#) 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 eBusiness application view maps to a given Siebel Analytics dashboard. In the Siebel eBusiness 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. Otherwise, one of two things may happen:

- If users have access to a view in the Siebel eBusiness application, but do not have access to the corresponding dashboard, then they see an error message indicating that they do not have access to the dashboard.
- 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 eBusiness application user interface.

Responsibilities control access to Siebel views, and therefore they also control access to Siebel Analytics applications dashboards. 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 the view security of the dashboard. If you get an Access Denied error when accessing Siebel Analytics through the Siebel operational application view, then either 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

Data-level security defines what the application user sees inside a report.

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*.

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 21](#).

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 21. 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 |

Table 21. Security Configuration by Dimension

| Dimensions Secured | Primary Owner | Primary Position | Org Based |
|--|----------------------|-------------------------|------------------|
| Employee (OLTP) | | 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 |
| Holdings (Financial Services & Life Sciences) | | X | |
| Households | | | X |
| Opportunity | | X | X |
| Orders | | X | X |
| Organization (OLTP) | | X | |
| Programs | | | X |
| Quotes | | X | X |
| Responses | X | | |
| Review Or Objective (OLTP) | | X | |
| Segment | | X | X |
| Service Requests | X | | X |
| W_ACT_PROD_F (Financial Services & Life Sciences) | | X | |
| W_MED_ED_F (Financial Services & Life Sciences) | | X | |
| W_OBJECTIVE_F (Financial Services & Life Sciences) | | X | |
| W_PER_RANK_F (Financial Services & Life Sciences) | | X | |

Table 21. Security Configuration by Dimension

| Dimensions Secured | Primary Owner | Primary Position | Org Based |
|--|----------------------|-------------------------|------------------|
| 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 Repository

NOTE: Data-level security in Siebel Analytics applications is based on the position- and organization-based security model of the Siebel eBusiness applications. Refer to *Security Guide for Siebel eBusiness Applications*.

This section describes the configuration of data from the Siebel Data Warehouse, and refers only to the Data Warehouse tables. The setup for the Siebel transactional database data is similar, although the physical schema joins are different.

Data-level security in the Analytics repository is implemented in three major steps.

- 1** Set up initialization blocks that obtain specific security-related information, such as the user's primary position ID, when a user logs in.
- 2** Set up the joins to the appropriate security tables in the metadata physical & logical layers.
- 3** Set up the filters for each security group on each logical table that needs to be secured.

For more information about security groups and filters as well as on how to setup joins in the repository, see *Siebel Analytics Web Administration Guide*.

In the Siebel Analytics repository, the initialization blocks have already been set up for obtaining a given user's primary position, primary organization, and the owner ID. There are three initialization blocks:

- **Primary Position ID**

This initialization block obtains the primary position of the given user, based on the user's login, and populates the variable PRIMARY_POSTN_ID. The SQL used by the block is run against the Siebel transactional database, and therefore reflects real-time position ID information.

- **Orgs for Org-based Security**

This initialization block obtains the list of organizations that a given user belongs to from the Siebel transactional database. The variable populated is ORGANIZATION.

- Primary Owner ID

This initialization block obtains the owner ID for the given user. It obtains this information from the Siebel transactional database and populates the PR_OWNER_ID variable.

There are also preconfigured groups that have been set up with filters on several logical dimensions. The two groups that have filters on them are Primary Position-based Security and Primary Org-based Security. [Table 21](#) shows the logical tables and the kind of security applied on those tables.

An example of how to configure the Opportunity Dimension is given below.

```
“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 & organizations, employees) that report to the user through a hierarchical reporting mechanism. There is an alias setup on W_PARTY_LOGIN for each join with a dimension.

You can add security to a new dimension—for example, W_AGREE_D (Agreements).

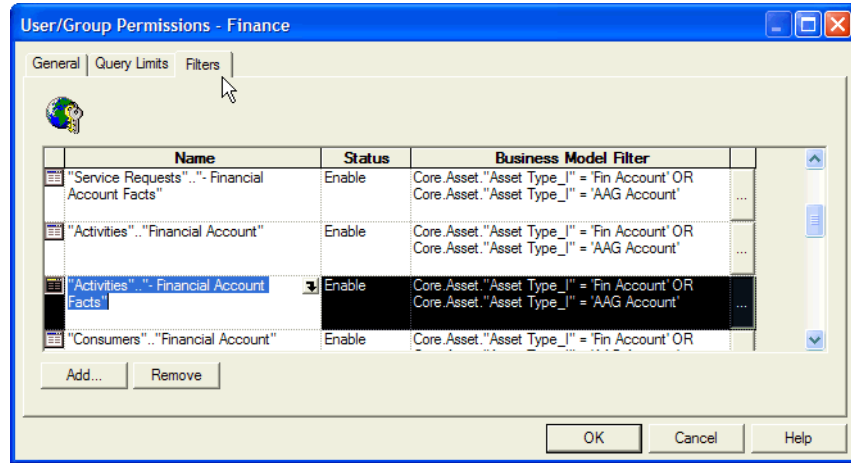
To configure the physical table join between W_OPTY_D and W_PARTY_LOGIN

- 1** Create an alias on W_PARTY_LOGIN specifically to join to W_AGREE_D.
- 2** Configure the join in the physical layer.
- 3** Configure a logical table join by adding the appropriate tables in the business layer.

NOTE: The columns VIS_PR_POS_ID and VIS_PR_BU_ID in the dimensional tables contain the record's primary owning position & owning organization.

- 4** Configure the filter on the logical tables that restrict the data.
 - a** To set up a filter, right-click on the group and choose Properties.

- b** In the Properties dialog box, click on the Permissions box and select the Filter tab.



- c** To add a new filter, click on the ellipsis box and find the business model layer table that needs to be secured.
- d** Configure the WHERE clause on the table so that the data is filtered.

Organization-based security has been implemented using the row-wise initialized variable ORGANIZATION. This implementation is slightly different from that of the position-based security, because the number of organizations is usually limited, compared to the number of positions in a given environment. Therefore, using the row-wise initialized variable ORGANIZATION to filter data using a WHERE IN clause is efficient. However, joining the dimension with the W_PARTY_LOGIN is more efficient, because the number of positions used for filtering the data can be large.

Position and Organization Initialization Variables

The Siebel Analytics repository contains two preconfigured initialization blocks for Position-based & 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, refer to *Siebel Analytics Server Administration Guide*.) You can set up a similar variable that is a union of all the positions and organizations that the user has access to. To set up such a variable, do one of the following:

- Use the W_PARTY_LOGIN table in the data warehouse.
- Get this variable directly from the Siebel transactional database for a real-time list.

Getting the variable directly from the Siebel transactional database requires an understanding of the Siebel data model with reference to security. For each user login, the W_PARTY_LOGIN table has a recursive list of all positions and organizations. The logical equivalent of this setup is:

```
W_PARTY_LOGIN.PARTY_ID = valueof(NQ_SESSION.POSTN_ORG_UNION)
W_OPTY_PARTY.PARTY_ID = W_PARTY_LOGIN.PARTY_ID and
W_OPTY_PARTY.OPTY_ID = W_OPTY_ID.ROW_ID
```

In an alternative implementation, use an additional join between W_PARTY_LOGIN and W_[DimensionName]_PARTY instead of using the row-wise initialization. In the case of Opportunities, for example, this can be set up as shown:

```
W_PARTY_LOGIN.LOGIN = valueof(NQ_SESSION.USER) and
W_OPTY_PARTY.PARTY_ID = W_PARTY_LOGIN.PARTY_ID and
W_OPTY_PARTY.OPTY_ID = W_OPTY_ID.ROW_ID
```

These two joins have the same effect as the earlier row-wise initialization variable solution, but contain an additional table join.

Default Security Settings

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.

Analytics Applications Specific Security Groups

This section covers the data- and object-level security for areas within the Siebel eBusiness Applications and Siebel Industry Applications.

For the purpose of this chapter, Responsibility is interchangeable with Repository group and Web Catalog group; they have a one-to-one correspondence. (For more on responsibilities and views, see [“Responsibilities and Access” on page 207.](#))

Siebel eBusiness Applications include the following:

- Siebel Sales—see [“Sales Analytics Security” on page 221](#)
- Siebel Employee Relationship Management—see [“ERM Analytics Security” on page 224](#)
- Siebel Partner Relationship Management—see [“Partner Relationship Management Security” on page 226](#)

Sales Analytics Security

Siebel Sales Analytics defaults to the following data-level visibility for certain responsibilities, as shown in [Table 22](#).

Responsibilities and Data-Level Visibility

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, refer to [“Applications User Authentication and Security Setup” on page 203](#) in this chapter and see *Security Guide for Siebel eBusiness Applications*.

Table 22. 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 22. Siebel Sales Analytics Default Data-Level Visibility

| Responsibility | Subject Area | Default Visibility |
|---|---------------------------------|---|
| Sales Manager Analytics Field Sales Representative Analytics | Pipeline Orders Customers | <p>Primary position data-level security is imposed on:</p> <ul style="list-style-type: none"> ■ Order dimension ■ Opportunity dimension ■ Account dimension ■ Opportunity Revenue, Expected Revenue, and Closed Revenue metrics ■ # of Orders <ul style="list-style-type: none"> 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 | <p>No specific data-level security.</p> <p>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.</p> <p>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 <code>CREATED_BY</code> column in the Opportunity data model and not on the primary owner of the opportunity.</p> |

To extend these data-level visibility restrictions to other metrics and dimensions, refer to [Table 21](#) and use the metrics and dimensions in [Table 22](#) as examples.

ERM Analytics Security

Siebel ERM Analytics is divided into Workforce, Partner Manager, and Partner Portal Analytics.

Workforce Analytics Responsibilities and Security

Siebel Responsibilities for Workforce Analytics are shown in [Table 23](#).

Table 23. Siebel Responsibilities for Workforce Analytics

| Responsibility | View Name | SSO Symbolic URL Name | Dashboard Name | Viewable Pages | Subject Areas |
|-----------------------|------------------------|------------------------------|-----------------------|-------------------------|-----------------------|
| ERM Analytics VP | SSO ERM Dashboard View | SSO ERM Executive Dashboard | Employee Performance | Organizational Overview | Workforce Summary |
| | | | | Team Status | Workforce Training |
| | | | | Training | Workforce Performance |
| | | | | Performance Management | |
| | | | | My Performance | |
| ERM Analytics Manager | SSO ERM Dashboard View | SSO ERM Executive Dashboard | Employee Performance | Team Status | Workforce Summary |
| | | | | Training | Workforce Training |
| | | | | Performance Management | Workforce Performance |
| | | | | My Performance | |

Table 23. Siebel Responsibilities for Workforce Analytics

| Responsibility | View Name | SSO Symbolic URL Name | Dashboard Name | Viewable Pages | Subject Areas |
|------------------------------|---------------------------------|------------------------------|--------------------------|------------------------|-----------------------|
| ERM Analytics User | SSO ERM Dashboard View | SSO ERM Executive Dashboard | Employee Performance | My Performance | Workforce Summary |
| | | | | | Workforce Training |
| | | | | | Workforce Performance |
| ERM Analytics HR | SSO ERM HR Dashboard View | SSO ERM HR Dashboard View | Human Resource Analytics | Training | Workforce Summary |
| | | | | Performance Management | Workforce Training |
| | | | | | Workforce Performance |
| ERM Analytics HelpDesk | SSO ERM HelpDesk Dashboard View | SSO ERM HelpDesk View | HelpDesk Analytics | Overview | Service Request |
| | | | | Staff Performance | |
| ERM Analytics HelpDesk Agent | SSO ERM HelpDesk Dashboard View | SSO ERM HelpDesk View | HelpDesk Analytics | Agent Performance | Service Request |

Table 23 also outlines the symbolic URL names for Workforce Analytics. To change or to update these symbolic URLs with more dashboards, see the section [“Customizing the Analytics Content on the Siebel Operational Application Home Page”](#) on page 291.

Partner Relationship Management Security

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 dashboard related to campaigns. Siebel PRM Analytics also includes flexible security mechanisms to control access to subject areas and to data.

The Analytics roles map to Siebel Responsibilities in the Siebel operational application. This section describes the roles and associated dashboards and pages for both partner Manager and Partner Portal applications. It also includes subject area and data-level security settings for responsibilities.

Partner Manager Role-Based Dashboard Mapping

[Table 24](#) provides the dashboard and page tab mapping for specific responsibilities in the Siebel PRM Partner Manager application.

Table 24. 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 24. Siebel Responsibilities for PRM Analytics

| Responsibility | Dashboard | Page Tab Name |
|----------------------------------|--|-----------------------|
| Channel Executive Analytics User | Channel Customers | Customer Profile |
| | Channel Executive | Customer Satisfaction |
| | Channel Executive | Pipeline |
| | Channel Executive | Product |
| | Channel Executive | Program |
| | Channel Executive | Revenue |
| | Channel Executive | Service |
| | Channel Segmentation | Channel Mix |
| | Channel Segmentation | Partner Territory |
| | Channel Segmentation | Partner Tier |
| | Channel Segmentation | Partner Type |
| | Channel Marketing Manager Analytics User | Channel Customers |
| Channel Customers | | Sales |
| Customer Marketing | | Effectiveness |
| Customer Marketing | | Responses |
| Customer Marketing | | ROI |

Table 24. Siebel Responsibilities for PRM Analytics

| Responsibility | Dashboard | Page Tab Name |
|-----------------------------------|----------------------|-----------------------|
| Channel Operations Analytics User | Channel Commerce | Orders |
| | Channel Commerce | Overview |
| | Channel Commerce | Quotes |
| | Channel Commerce | Products |
| | Channel Customers | Overview |
| | Channel Customers | Sales |
| | Channel Customers | Service |
| | Channel Marketing | Effectiveness |
| | Channel Marketing | Overview |
| | Channel Sales | Margins |
| | Channel Sales | Pipeline |
| | Channel Sales | Revenue |
| | Channel Sales | Sales Cycle |
| | Channel Sales | Wins |
| | Channel Segmentation | Partner Territory |
| | Channel Segmentation | Partner Tier |
| | Channel Segmentation | Partner Type |
| | Channel Service | Customer Satisfaction |
| | Channel Service | Overview |
| | Channel Service | Products |
| | Channel Service | Resolution Time |
| | Channel Service | Service Requests |
| | Channel Training | Overview |
| Channel Training | Performance | |

Partner Portal Role-Based Dashboard Mapping

The dashboard and page tab mapping for specific responsibilities in the Siebel PRM Partner Portal application are shown in [Table 25](#).

Table 25. 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 25. 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 the section [“Applications User Authentication and Security Setup”](#) on page 203.

The subject area visibility for responsibilities in Partner Manager are shown in [Table 26](#).

Table 26. 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 | X |
| Campaigns | X | X | X | X |
| Consumers | X | X | X | X |
| Customer Satisfaction | X | X | X | X |
| Customers | X | X | X | X |
| Orders | X | X | X | X |
| Partner Training | X | X | X | X |
| Partners | X | X | X | X |
| Pipeline | X | X | X | X |
| Pricing | X | X | X | X |
| Products | X | X | X | X |
| Real-Time Activity | | | | |
| Real-Time Assets | | | | |
| Service Requests | X | X | X | |

X indicates that subject area is visible for the user holding that responsibility

Applications User Authentication and Security Setup

Analytics Applications Specific Security Groups

The subject area visibility for roles in Partner Portal is shown in [Table 27](#).

Table 27. Subject Area Visibility for PRM Partner Portal

| Subject Area | Partner Executive Analytics User | Partner Operations Manager Analytics User | Partner Sales Manager Analytics User | Partner Sales Rep Analytics User | Partner Service Manager Analytics User | Partner Service Rep Analytics User |
|-----------------------|----------------------------------|---|--------------------------------------|----------------------------------|--|------------------------------------|
| Activities | X | X | X | X | X | X |
| Assets | X | X | | | X | X |
| Campaigns | X | X | | | | |
| Consumers | X | X | | | | |
| Customer Satisfaction | X | X | | | X | X |
| Customers | X | X | X | X | X | X |
| Orders | X | X | X | X | X | X |
| Partner Training | X | X | X | X | X | X |
| Partners | X | X | | | | |
| Pipeline | X | X | X | X | | |
| Pricing | | | | | | |
| Products | X | X | X | X | X | X |
| Real-Time Activity | | | | | | |
| Real-Time Assets | | | | | | |
| Service Requests | X | X | | | X | X |

X indicates that subject area is visible for the user holding that responsibility

PRM Analytics Data-Level Visibility

Siebel PRM Analytics also provides brand owners the ability to restrict security based on the user's organization or position. This security mechanism makes sure that one user does not have access to another user's data. It also makes sure that one partner does not have access to another partner's data. Data-level security is administered for responsibilities. Details regarding setting up data-level visibility are provided in the section [“Applications User Authentication and Security Setup” on page 203](#).

[Table 28](#) shows the data-level security settings included for the responsibilities in Partner Manager and Partner Portal.

By default, Partner Service Representative and Sales Representative have been set up for Primary position-based security. Some deployments may choose to change it to Organization-based security, using the following procedure.

To change the security group from Position-based to Organization-based

- 1** In the Siebel Analytics Administration Tool, go to Tools > Manage Security.
- 2** Click on Hierarchy.
- 3** Make the two security groups (Partner Service Representative and Partner Sales Representative) members of the Primary Org-Based group.
- 4** Remove the groups from the Primary Position-Based group.
- 5** Exit the Administration Tool.

Table 28. Siebel PRM Data-Level Security Settings

| Responsibility | Data-Level Security | Type | Comments |
|--|---------------------|------|----------|
| Channel Executive Analytics User | No | N/A | N/A |
| Channel Operations Analytics User | No | N/A | N/A |
| Channel Account Manager Analytics User | No | N/A | N/A |

Table 28. Siebel PRM Data-Level Security Settings

| Responsibility | Data-Level Security | Type | Comments |
|--|----------------------------|--------------|--|
| Channel Marketing Manager Analytics User | No | N/A | N/A |
| Partner Executive Analytics User | Yes | Organization | Displayed records should match organization of the user. |
| Partner Sales Manager Analytics User | Yes | Organization | Displayed records should match organization of the user. |
| Partner Sales Rep Analytics User | Yes | Position | Displayed records should match position of the user. |
| Partner Service Manager Analytics User | Yes | Organization | Displayed records should match organization of the user. |
| Partner Service Rep Analytics User | Yes | Position | Displayed records should match position of the user. |

Siebel Industry Applications Security

This section describes the additional security configurations that may be necessary for your Siebel Industry Applications. It also describes the particular responsibilities associated with the application dashboards.

Siebel Industry Applications include the following:

- Siebel Consumer Sector—see [“Consumer Sector Security”](#) on page 235
- Siebel CME—see [“Communications, Media, and Energy \(CME\) Security”](#) on page 236
- Siebel Financial Services—see [“Financial Services Security”](#) on page 238
- Siebel Life Sciences—see [“Life Sciences Security”](#) on page 240

Consumer Sector Security

Table 29 describes the consumer sector responsibilities associated with each CS Dashboard.

Table 29. Consumer Sector Responsibilities Associated with Each CS Dashboard

| Screen Name | Siebel Responsibility | Dashboard | Pages |
|-----------------|-----------------------|---------------------|--|
| Sales Analytics | VP Sales | VP Sales | Business Overview, Product Overview |
| | | Sales Performance | Sales Volume Planning, Hierarchy, Trends, Growth |
| | | Promotion | Plan Year to Date, Corporate |
| | Key Account Manager | Key Account Manager | Business, Category |
| | | Promotion | Plan year to date, Key account |
| | | Funds | Account |
| | | Retail Audit | Last audit, Trends |
| | | Sales Performance | Sales Volume Planning, Hierarchy, Trends, Growth |

Communications, Media, and Energy (CME) Security

Siebel Communications, Media, and Energy Analytics applies the Siebel eBusiness Applications security model. That is, it uses Siebel eBusiness Applications responsibilities (and corresponding repository and Web catalog groups) for controlling access to Siebel eBusiness Applications objects (both metadata and Web catalog objects). This security model is described in [“Integrated Security for Responsibilities and Groups” on page 207](#).

In addition to responsibilities provided by the Siebel eBusiness Applications, Siebel Communications, Media, and Energy (CME) provides additional responsibilities, and responsibility-specific security, as indicated in [Table 30](#).

Table 30. CME Responsibilities Associated with Each CME Dashboard

| Screen Name | CME Responsibility | CME Dashboard | Dashboard Pages |
|---------------------|---|--------------------|---|
| Marketing Analytics | CM Marketing Analytics User CM Marketing Analytics Administrator | Loyalty Management | <ul style="list-style-type: none">■ Customer Lifetime Value■ Churn Propensity■ Selling Propensity■ Financial Risk■ Actual Churn |

Table 30. CME Responsibilities Associated with Each CME Dashboard

| Screen Name | CME Responsibility | CME Dashboard | Dashboard Pages |
|-------------------|---|--------------------|--|
| Sales Analytics | CM Sales Analytics User CM Sales Analytics Administrator | Revenue Management | <ul style="list-style-type: none"> ■ Sales Portal ■ Service Activations ■ Service Modifications ■ Service Disconnections |
| | | Account Management | <ul style="list-style-type: none"> ■ Sales Portal ■ Service Activations ■ Service Modifications ■ Service Disconnections |
| Service Analytics | CM Service Analytics User CM Service Analytics Administrator | Account Management | <ul style="list-style-type: none"> ■ Trouble Tickets ■ Customer Satisfaction |

Financial Services Security

Siebel eFinance Analytics, eInsurance Analytics, and eHealthcare Analytics apply the Siebel eBusiness Applications security model. That is, they use Siebel eBusiness Applications responsibilities (and corresponding repository and Web catalog groups) for controlling access to Siebel eBusiness Applications objects (both metadata and Web catalog objects). This security model is described in [Chapter 8, “Applications User Authentication and Security Setup.”](#)

In addition to responsibilities provided by the Siebel eBusiness Applications, Siebel eFinance Analytics, eInsurance Analytics, and eHealthcare Analytics provide additional responsibilities, and responsibility-specific security, as indicated in [Table 31](#).

For the Financial Services products mentioned, the Siebel eBusiness Applications security model has been extended:

- One finance-specific responsibility (and corresponding repository and Web catalog group) called Finance Analytics User; this responsibility must be used in conjunction with Siebel eBusiness Applications responsibilities and groups to control access to Finance-specific objects in eFinance Analytics.
- One Insurance-specific responsibility (and corresponding repository and Web catalog group) called Insurance Analytics User; this responsibility must be used to control access to the Insurance and Healthcare-specific objects in eInsurance and eHealthcare Analytics.

For example, when you give a user all horizontal Sales responsibilities and also include the finance responsibility called Finance Analytics User, this user 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 31](#).

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 31. FS Responsibility Required to View a FS Dashboard

| FS Responsibilities | Dashboards |
|----------------------------|----------------------------------|
| Finance Analytics User | Credit |
| | Credit Card |
| | Private Banking |
| | Consumer Banking |
| | Corporate and Commercial Banking |
| | Investment Holdings |
| | Separate Account Management |
| | Wealth Management |
| | Institutional Sales |
| | Investment Banking |
| | Finance Marketing |
| | Finance Executive |

Table 31. FS Responsibility Required to View a FS Dashboard

| FS Responsibilities | Dashboards |
|--------------------------|-----------------------------|
| Insurance Analytics User | Policy Sales |
| | Policy Service |
| | Insurance Marketing |
| | Insurance Executive |
| | Insurance Claims |
| | Health Plan Sales |
| | Health Plan Service |
| | Health Plan Marketing |
| | Health Plan Executive |
| | Insurance Agents / Partners |

Life Sciences Security

This section 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 one of two forms of position-based security, brick or ZIP Code. The Siebel Data Warehouse stores the position-to-brick or -ZIP Code relationship in the W_ALIGNMT_DH table, align_item_type = Zipcode or Brick. The user-to-position relationship is stored in the W_PARTY_LOGIN table. A user sees only the data from the bricks or ZIP Codes that are available to that user's positions. This security model is enforced for all queries, with the exception of queries that deal exclusively with these elements:

- Time Period
- Product
- Invitee Status

Table 32 shows Pharma Analytics Responsibilities and Functions.

Table 32. Pharma Analytics Responsibilities and Functions

| Responsibility | Use |
|--------------------------------------|---|
| LS Administrator | Administrator privileges to all options on Pharma Analytics. |
| PH US Sales Analytics User | Enables access to Rx Sales Analytics dashboard, pages, reports, and sales effectiveness subject area using ZIP-to-territory alignment measures. |
| PH EMEA Sales Analytics User | Enables access to Rx Sales Analytics dashboard, pages, reports, and sales effectiveness subject area using brick-to-territory alignment measures. |
| PH Sales Analytics Administrator | Administrator privileges to Rx Sales Analytics option. |
| PH US Marketing Analytics User | Enables access to Pharma ROI, Call Activity Profit & Loss Report using ZIP Code territory alignment and Pharma Promotional Effectiveness Subject Area, and the MedEd ROI dashboards and reports and Medical Education Effectiveness Subject Area. |
| PH EMEA Marketing Analytics User | Enables access to Pharma ROI, Call Activity Profit & Loss Report using brick territory alignment and Pharma Promotional Effectiveness Subject Area, and Medical Education Effectiveness Subject Area with brick territory alignment. |
| PH Marketing Analytics Administrator | Administrator privileges to Pharma ROI, Call Activity Profit & Loss Report, Pharma Promotional Effectiveness Subject Area, and Medical Education Effectiveness Subject Area. |
| PH Mobile Analytics User | Enables access to Sales Rep Analytics option. |

Table 32. Pharma Analytics Responsibilities and Functions

| Responsibility | Use |
|--------------------------------------|--|
| PH Mobile Analytics Admin | Administrator privileges to Sales Rep Analytics option. |
| PH Medical Education Analytics User | Enables access to Medical Education Analytics option. |
| PH Medical Education Analytics Admin | Administrator privileges to Medical Education Analytics option. |
| PH US Call Activity Analytics User | Enables access to Call Activity Analytics Option for ZIP territory alignments. |
| PH EMEA Call Activity Analytics User | Enables access to Call Activity Analytics Option for brick territory alignments. |
| PH Call Activity Analytics Admin | Administrator privileges to Call Activity Analytics option. |
| PH US Executive Analytics User | Unrestricted access to all Pharma Analytics options with ZIP-based territories. |
| PH EMEA Executive Analytics User | Unrestricted access to all Pharma Analytics options with brick territories. |
| PH Executive Analytics Admin | Unrestricted access to all Pharma Analytics options with ZIP territories. |

Data warehouses typically have many components, each having its own security attributes and complexities. All the rules for security, data modeling, aggregate navigation, caching, and connectivity for the Siebel Data Warehouse are stored in metadata repositories on the Siebel Analytics Server.

Siebel eBusiness Applications are shipped with certain Siebel Analytics metadata. This chapter covers the Siebel Analytics metadata for Siebel eBusiness Applications, especially those areas which a Siebel administrator may need to adjust for specific Analytics purposes.

This chapter describes the administrative tasks necessary to configure Siebel Analytics for special purposes in Siebel eBusiness Applications. These administrative tasks generally cover two areas:

- [“Dashboard Content of Siebel eBusiness Applications Analytics” on page 243](#)
- [“Metadata Requirements For Siebel eBusiness Applications Analytics” on page 244](#)

Dashboard Content of Siebel eBusiness Applications Analytics

Dashboard content is related to Siebel Responsibility. A Siebel Analytics user’s access depends on that user’s responsibility. The Siebel administrator can change the default settings for responsibilities or change the default data-level security settings. This section covers administration of dashboard content.

Configuring Siebel Applications For Attribute Analysis

In order for Attribute Analysis to function properly, the sequence number associated with a class attribute must be set properly. The sequence numbers assigned to the Attributes must be unique. If the sequence number associated with an attribute is not unique, the Siebel Data Warehouse ETL process cannot distinguish between two attributes with the same sequence number, possibly resulting in the ETL process crashing and in flawed analyses.

To configure the attribute sequence numbers

- 1** From the Siebel operational application Site Map, select Application Administration > Class Administration.
- 2** In the Classes Applet, select the class whose attributes are going to be analyzed.
- 3** Select the Dynamic attributes child level applet, and from the applet menu select columns displayed.
- 4** Display the Analytics Sequence # column.
- 5** For each row in the Dynamic Attributes applet, enter a unique sequence number in the Analytics Sequence# column. If a sequence number already exists, change the sequence number to a unique value.
- 6** Repeat [Step 2](#) through [Step 5](#) for all the classes whose attributes are to be analyzed.

Metadata Requirements For Siebel eBusiness Applications Analytics

This section covers the Siebel Analytics metadata for Siebel eBusiness Applications, especially those areas which a Siebel administrator may need to adjust for specific analytics purposes.

Sales Analytics

Sales Analytics comprises these primary topics:

- [“Forecast Analytics” on page 245](#)

- [“Configuring Forecast, Quota, and Actual Analytics” on page 247](#)
- [“Currency Conversion” on page 255](#)
- [“Performance” on page 256](#)

This material is intended for the administrator and business owners responsible for Siebel Sales Analytics deployment.

Forecast Analytics

Siebel Sales Analytics provides several forecasting analytics reports preconfigured in both the Pipeline and Sales Effectiveness dashboards. This new feature performs real-time and historical analyses of forecast data to help manage each quarter’s expectations and results better.

To enable the forecasting charts included in these dashboards, the administrator needs to perform several group administration tasks.

To enable the dashboard forecasting charts

- 1** Log in to Siebel Analytics as administrator and navigate to the Answers > Analytics Web Administration view.
- 2** Go to Manage Web Groups & Users. In the No Forecasting Web group, click Edit (this icon resembles a hand).
- 3** Click the delete icon (X) to delete Authenticated Users from the Group Members section of this group, then click Finished.
- 4** In the No Forecasting Lite group, click Edit.
- 5** Under the Group Membership section, click Add New Member and type the following group name in the Member Name box: Authenticated Users.
- 6** Click Add Member, then click Finished.

Siebel Sales Analytics also provides several preconfigured reports based on Expected Revenue for those customers that do not own Siebel Forecasting. The preconfigured dashboards display these charts by default.

Forecast Analytics Terms

Siebel Analytics contains several types of forecasting analyses, all based on the following basic metrics.

- **Summary Forecast** Derived from the summary-level forecast data displayed in the Forecast screen, Summary view. This data exists for a given position, for a given time period and for a specific date. For example, a Sales Manager reviewing her Summary Forecast sees that on August 10, she forecasted \$6 million for the third quarter.
- **Detail Forecast** Derived from the detail-level forecast data displayed in the Forecast screen, Detail view. This metric allows the user to analyze his personal forecast details. As a result, in addition to position and time information, these details can provide Account, and Opportunity information, if the customer is using a Detail Forecast Series in which every subordinate passes detailed forecast information to her manager during the forecast submission process. If the customer uses a Summary Forecast Series in which only a subordinate's summary information is passed on to the manager, then no account or opportunity information is available to the manager through this metric.
- **Frontline Forecast** Derived from the detail-level forecast data displayed in the Forecast screen, Detail view. The difference between Frontline and Detail forecast metrics is that the Frontline metric shows the detailed information from the original owner of the forecasted opportunity. In other words, this metric displays the detail information from the user's subordinates as well as her own. The result of this difference is that detailed information, such as Account and Opportunity information, is always available to the user because the metric finds all the opportunities in the forecast where they first appear—at the front lines of the organization. For example, a Sales Manager reviewing her Summary Forecast would see that on August 10, her team in aggregate forecasted \$7 million for the third quarter based on several specific opportunities.
- **Archive Date** The date on which a Forecast is deemed to be completed and ready for archival in the Data Warehouse. This field can be found in the Forecast Administration screen, Forecast Series view, Forecast Series Dates list. To display the date, go to Menu > Columns Displayed and select the Archive Date column. Only archived Forecasts are sent to the Data Warehouse during the ETL process.

Configuring Forecast, Quota, and Actual Analytics

Siebel Sales Analytics features the Siebel Forecasting module, which permits analysis by Forecast and by Actual versus Quota.

There are several administrative tasks to perform in order to allow Forecast and Actual versus Quota Analysis. These tasks are done in the Siebel Sales application and in the Siebel Forecasting module.

The business users must first decide what time period is the most meaningful for their business—typically it is quarter or year—and then develop the business processes required to generate meaningful Forecasts and Quotas for that time period. Typically, year-based processes are built on monthly forecasts and annual quotas while quarter-based processes are built on weekly, or semi-weekly forecasts, and quarterly quotas. The base time period is important because the structure of the Quotas and Forecasts need a common base period in order to allow Forecasts and Quotas to be compared meaningfully.

Configuring Sales Quotas

The first task is to set up Sales Quotas that can be used to compare to both Forecast Revenue and Actual Revenue. Do this in the Siebel Sales application Sales Quota Administration screen.

To set up Sales Quotas

- 1 In the Quotas view, create a Quota that can be used to assign appropriate revenue quotas to everyone in the sales organization.

This same Quota is assigned to many Quota Plans in order for it to span quarters or years and for it to apply to everyone in the sales organization.

For example, you have created a Quota named *Quarterly Sales Organization Quotas* and have assigned it a Quota Type of Amount and a Performance Measure of Revenue, since you plan to use revenue as your basis of comparison with forecast and actual revenues.

- 2 In the Quota Plans view, create all the relevant Quota Plans for the entire Sales Organization.

Each Plan has one specific time period associated with it, and carries one specific dollar amount for that period. So for each time period, multiple plans with multiple quota target revenues need to be created.

NOTE: The period associated with the Quota Plans must match the period used in the Forecast Series created in a later step.

As an example, you have created four separate plans for the first quarter of 2002—one each for Sales Representatives, Sales Managers, Sales Directors, and the Vice President of Sales. In the following figure, you have assigned each such plan an appropriate Period and designated them as Active. Although you have based the Quota Plans in this example on the positions of the quota plan participants, you could have based the plans on the revenue target to be associated with that plan, such as Q1 2002 \$1 million Quota Plan or Q1 2002 \$2 million Quota Plan.



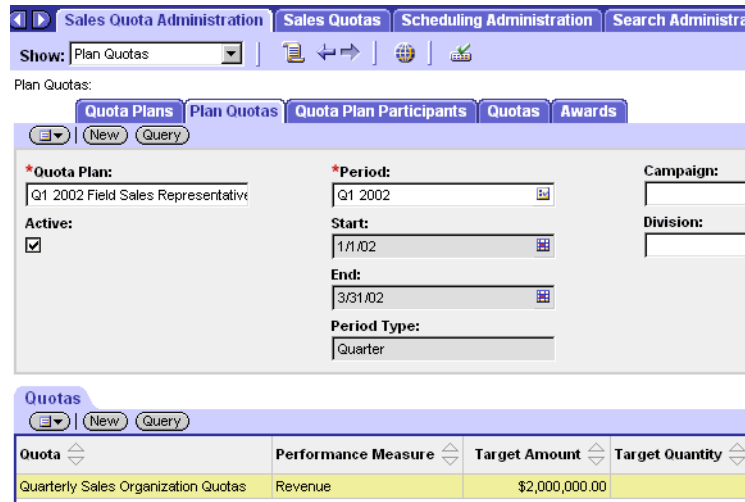
The screenshot shows the Siebel Quota Administration interface. At the top, there are navigation tabs: Sales Quota Administration, Sales Quotas, Scheduling Administration, and Search Admin. Below these is a 'Show:' dropdown menu set to 'Quota Plans' and several icons. Underneath, there are more tabs: Quota Plans, Plan Quotas, Quota Plan Participants, Quotas, and Awards. A 'Query Results' table is displayed with the following data:

| Name | Active | Period | Start | End |
|--|--------|---------|--------|---------|
| Q1 2002 Field Sales Director Quota | ✓ | Q1 2002 | 1/1/02 | 3/31/02 |
| Q1 2002 Field Sales Manager Quota | ✓ | Q1 2002 | 1/1/02 | 3/31/02 |
| Q1 2002 Field Sales Representative Quota | ✓ | Q1 2002 | 1/1/02 | 3/31/02 |
| Q1 2002 Field Sales VP Quota | ✓ | Q1 2002 | 1/1/02 | 3/31/02 |

3 Assign Quotas and revenue targets to each Quota Plan in the Plan Quotas view.

For each Quota Plan, the administrator needs to associate the Quota created in the first step to the plan, and needs to assign that quota an appropriate Target Revenue. For accurate analysis, it is important that only one Amount/Revenue Quota should be associated with any given Quota Plan.

In the Sales Quota Administration—Plan Quotas screen, in the following figure, the quota *Quarterly Sales Organization Quotas* is associated with the quota plan *Q1 Field Sales Representative Quota*, and an associated revenue target of \$2 million is also added to the quota plan.



4 Associate the relevant participants to the Quota Plans created in the Quota Plan Participants view. For example, the upper applet (Quota Plan Participants) shows the quota plan *Q1 2002 Field Sales Representative Quota*, while the lower applet (Participants) shows the three Sales Representatives are associated with this quota plan.

Configuring Forecast Series

In the Siebel Sales application Forecast Administration screen, you set up a Forecast Series that can be used to compare to both Quota Target Revenue and Actual Revenue.

NOTE: For those customers that do not use Siebel Forecasting, these steps are unnecessary, because all forecasting charts for such customers are based on expected revenue, which is tracked and managed in the Opportunities screen and not in Siebel Forecasting.

To configure Forecast Series

- 1 In the Forecast Administration > Forecast Series > More Info view, create one Forecast Series for all members of the Sales Organization that can be used period after period.

In the following example, a forecast series called *Quarterly Sales Forecast with Details* has been created, and the relevant Auto Forecast Search Spec, Associated Search Spec, and Detail Level, as well as a weekly Interval, have been assigned to the series. Because the functional time period in this example is Quarter, use a weekly forecasting process. See *Siebel Forecasting Guide* for additional information on how to create and administer a forecast.

- In the Forecast Administration > Forecast Series > Forecast Series Dates view, establish the individual forecasts that comprise the Forecast Series.

Note that in the following figure, forecasts created in the Forecast Series span multiple quarters because Quarter is the base time period. If you use Year as your base time period, you need to create forecast series that span multiple years. Spanning time periods in the Forecast Series makes performing historical forecasting accuracy analysis significantly easier.

| More Info Forecast Series Dates Forecast Series Participants Forecast Series Organizations | | | | | | |
|--|------------|----------|-------------------|-------------------|-------------|--|
| New Query | | | | | | |
| Forecast Date | Start Date | End Date | History View Date | History Edit Date | Description | |
| 1/1/02 | 1/1/02 | 3/31/02 | | | | |
| 1/8/02 | 1/1/02 | 3/31/02 | | | | |
| 1/15/02 | 1/1/02 | 3/31/02 | | | | |
| 1/22/02 | 1/1/02 | 3/31/02 | | | | |
| 1/29/02 | 1/1/02 | 3/31/02 | | | | |
| 2/5/02 | 1/1/02 | 3/31/02 | | | | |
| 2/12/02 | 1/1/02 | 3/31/02 | | | | |
| 2/19/02 | 1/1/02 | 3/31/02 | | | | |
| 2/26/02 | 1/1/02 | 3/31/02 | | | | |
| 3/5/02 | 1/1/02 | 3/31/02 | | | | |
| 3/12/02 | 1/1/02 | 3/31/02 | | | | |
| 3/19/02 | 1/1/02 | 3/31/02 | | | | |
| 3/26/02 | 1/1/02 | 3/31/02 | | | | |
| 4/2/02 | 4/1/02 | 6/30/02 | | | | |
| 4/9/02 | 4/1/02 | 6/30/02 | | | | |
| 4/16/02 | 4/1/02 | 6/30/02 | | | | |
| 4/23/02 | 4/1/02 | 6/30/02 | | | | |
| 4/30/02 | 4/1/02 | 6/30/02 | | | | |
| 5/7/02 | 4/1/02 | 6/30/02 | | | | |
| 5/14/02 | 4/1/02 | 6/30/02 | | | | |

Forecast Series span multiple quarters by modifying the Start Date and End Date of the forecasts to reflect the Quarter in which the forecast falls. For example, the Start Date and End Date of the 4/2/2002 forecast are 4/1/2002 and 6/30/2002, respectively, while those of the 3/25/2002 forecast are 1/1/2002 and 3/31/2002, respectively.

Make sure that the Start and End Dates used in the various forecasts align perfectly with the Periods used in the Quota Plans created earlier.

- In the Forecast Series Participants view, add the appropriate people to the Forecast Series. In the following example, the same three Sales Representatives have been assigned to the quota plan *Q1 2002 Field Sales Representative Quota* and to the forecast series *Quarterly Sales Forecast with Details*.

The screenshot shows the Siebel Forecast Series configuration interface. The top navigation bar includes 'Forecast Administration', 'Business Process Administration', 'Fulfillment', 'Group Administration', and 'Home'. The 'Forecast Administration' tab is active, showing a 'Show:' dropdown set to 'Forecast Administration' and several icons. Below this, the 'Forecast Series Participant:' section is visible.

The main configuration area is titled 'Forecast Series' and contains several fields:

- *Name:** Quarterly Sales Forecast With Dete
- Description:** Quarterly Sales Forecast for SA
- *Active:**
- Auto Forecast Search Spec:** [Calculated Primary Flag] = 'Y' and [Committed] = 'Y'
- Rollup Search Spec:** (Empty field)
- *Detail Depth:** Revenue Detail
- *Associate Search Spec:** [Calculated Primary Flag] = 'Y'
- *Visibility:** My Revenues
- Public:**

Below the configuration area, there are tabs for 'More Info', 'Forecast Series Dates', 'Forecast Series Participants', and 'Forecast Series Organizations'. The 'Forecast Series Participants' tab is selected, displaying a table of participants:

| First Name | Last Name | Position |
|------------|-----------|---------------------------|
| Pat | Summers | Director, EMEA Sales |
| Todd | Olenik | Director, Worldwide Sales |
| Wasaka | Takuda | District Manager 1 |
| Kelly | Wilson | District Manager 2 |
| Terry | Smythe | District Manager 6 |
| Madison | Stern | Regional Manager |
| | | Siebel Administrator 2 |

Actual Revenue

Once the Quotas, Quota Plans, and Forecast Series are created, establish the Actual metric to be used in comparison with Forecast and Quota Revenue.

In Siebel Analytics, both Order Revenue and Shipped Revenue metrics are already provided with Siebel Sales Analytics.

- Order Revenue is calculated based on the date on which the order was received and is credited to the person holding the primary position on the order.

- Shipped revenue is based on when the line items in the order shipped and is also credited to the person holding the primary position on the order.

NOTE: The system administrator must work with the business analysts to determine the appropriate metric to use in comparison to Quota and Forecast.

Overlay Sales Forces

You configure Overlay Sales Force analysis in a similar way to the way you configure Forecast and Actual versus Quota for the non-overlay sales force. However, in order to accurately generate overlay forecasts, you must assign different Primary Representatives to child-level revenues. You must also establish the overlay forecast series so that it finds all such child-level revenues using the Primary Representative on the child-level records. Create a separate overlay sales quota in the same manner as the non-overlay quota plans. Once the independent overlay forecasts and quota plans are established, you can compare forecasts and quotas for overlay sales professionals.

The next task is to establish an actual revenue metric with team-based visibility (instead of primary representative-based visibility) so that all sales professionals on a given order get credit for that order. See *Siebel Forecasting Guide* for additional information on how to create and administer a forecast for a matrixed sales organization.

NOTE: The Revenues functionality is licensed with Siebel Forecasting and is not included in the base Siebel Sales.

Developing Charts Using Forecast, Quota, and Actual

Many of the standard Forecasting reports rely on the CURRENT_FCST_DATE Initialization Block variable. This variable finds the most recent forecast date *for the user of the report*, and not the most recent forecast date in the system.

The administrator who develops the Forecast, Quota, and Actual charts is usually not a member of the company Forecast Series group. Therefore, no valid forecast dates and, consequently, no CURRENT_FCST_DATE is returned for the administrator. However, without a valid CURRENT_FCST_DATE, the Forecasting charts, which use this Initialization Block variable to find the current forecast, returns a No Results message for the administrator, thus making the development of forecast charts impossible.

To work around this, the administrator should, during development, remove the Primary_Postn_Id constraint from the CURRENT_FCST_DATE variable. Removing this constraint causes the variable to find the most recent forecast date in the entire system. This change makes development possible.

When development is completed, the administrator must return the Primary_Postn_Id constraint to the CURRENT_FCST_DATE Initialization Block variable so that the application user's most recent forecast is the one used. This Initialization Block is used in the following charts:

- Change in Forecast Details
- Change in Forecast Details Table
- Forecast versus Pipeline
- Change in Summary Forecast by Subordinate
- Forecast and Actual versus Quota by Subordinate
- W-E-B by Subordinate
- Detail Forecast by Industry Vertical
- Forecast versus Order Revenue by Subordinate
- Last Quarter Forecast versus Order Revenue by Subordinate

See *Siebel Analytics User Guide* for detailed instructions regarding Forecast, Quota, and Actual Analytics reports.

Currency Conversion

In order to facilitate real-time analysis, Siebel Sales Analytics provides for currency conversion for all data from the Operational Database. This allows users to see all metrics in a single currency, and facilitating meaningful aggregation and comparison of all revenue-based metrics. The system converts all currencies into the default currency used by the Siebel Data Warehouse, so that data from the operational database can be meaningfully compared to data coming from the data warehouse.

NOTE: The system administrator must work with the business analysts to determine the appropriate currency conversion.

Accurate currency conversion requires that the currency to be converted have two attributes:

- A currency code that represents its current currency
- A conversion date that represents the date for which the currency is to be converted

Any revenue information that lacks one of these attributes is converted using ETL Unknown Exchange Rate. In the standard product, this Initialization Block variable is defined as 1, meaning that unknown currencies are not converted. It is recommended that you use 1 or 0 for this variable so that currencies with unknown current currencies or conversion dates are not converted (ETL Unknown Exchange Rate = 1) or are ignored (ETL Unknown Exchange Rate = 0).

Performance

Siebel Sales Analytics uses the Siebel transactional database to provide real-time analytics capabilities. System performance must be carefully managed by using the various caching capabilities of both the Web Server and the Siebel Analytics Server and by using the optimization capabilities of their databases. Read *Siebel Analytics Performance Tuning Guide* before deploying Siebel Sales Analytics.

In addition to the performance tuning steps described, you can do two things to improve the overall performance of the Forecasting subject area:

- Archive forecasts in the data warehouse consistently.

Only archived forecasts are sent to the data warehouse during the ETL process. For instance, you archive each forecast one week after completion. By storing more forecasts in the data warehouse, you simultaneously improve the performance of the analytics queries and reduce the burden on the operational database.

The Initialization Block variable `ETLRunDateMinusInterval` controls which forecasts are sought in the operational database and which forecasts are sought in the data warehouse. This variable looks for forecasts with dates that are some interval before the last ETL run date. For instance, if each forecast is stored one week after completion and an ETL is run each week, then it is guaranteed that any forecast two or more weeks old is in the data warehouse, so the `ETLRunDateMinusInterval` should be set to `ETLRunDate - 14 (days)`.

The Siebel Analytics Server looks in the data warehouse only for those forecasts that are actually there, so care must be taken in determining this variable.

- Use the single currency forecast.

By preconverting the forecast data into the data warehouse default currency, you remove the necessity for all forecast data to be currency-converted. This allows you to remove the joins and SQL required in the forecast metadata for currency conversion, thereby improving performance. Refer to *Siebel Forecasting Guide* for detailed instructions on how to establish and maintain single currency forecasts.

Workforce Analytics

Siebel Employee Relationship Management (ERM) provides Analytics for Workforce Training, Workforce Performance, and HelpDesk. This section describes some of the configuration that may be necessary for Workforce Analytics. For further information on Siebel ERM, see *Siebel Employee Relationship Management Administration Guide*.

Workforce Training Subject Area

In the Workforce Training subject area, the Current Organization column captures a current training user's Division when the user registers for a training course. Therefore, registration is required in order to capture the user's Organization.

NOTE: Division is captured rather than Organization so that the hierarchy can be captured as well. This hierarchy is commonly referred to as organizational hierarchy, although it is actually the divisional hierarchy. In Workforce Training, it is called Organization. In order to be consistent, the user's division is referred to as Organization here.

The Division and divisional hierarchy is captured in a table called S_SRCEVT_REG_NQ. This table is populated only if certain workflows are imported and activated during implementation. The process to import these workflows is outlined in [“Importing Workflows” on page 257](#). If you do not activate these workflows, but still want see the current organization and division of the employee, you must remove the Organization dimension from the presentation layer in Workforce Training and add the Organization and Division columns to the Employee dimension in the Workforce Training presentation layer.

Importing Workflows

From a Siebel dedicated Web client or mobile Web client, connect to the sample database on your Siebel operational application CD-ROM using any application; for example, Call Center or ERM.

To import a workflow

- 1 Go to Site Map > Business Process Administration > Workflow Processes.

2 Query for *ERM*Training*.

The following workflows appear:

- ERM Training Org Hierarchy Stamp
- ERM Training Stamp Get Org L1 Name
- ERM Training Stamp Get Org L2 Name and Id
- ERM Training Stamp Get Org Names SubProcess
- ERM Training Stamp Get Org_L3 Name and Id
- ERM Training Stamp Get Pr-postn_Id subprocess
- ERM Training Stamp Position to Org Subprocess

3 Click on a workflow, select Menu > Export Workflow, and save the workflow to the hard drive.

4 Repeat Step 3 for each workflow.

Set up your ERM environment and test the eTraining functionality fully. Once you have Siebel ERM eTraining tested and running correctly, import the above workflows into your environment and make them active.

Siebel Analytics Cache Persistence

The Siebel Analytics Server caches certain queries to improve end-user performance. If this cache is activated while you are using Workforce Analytics, you may not see the actions that you perform in the Siebel operational application screens reflected in the Siebel Analytics reports. The cache for Workforce Analytics is set by default to 12 hours. A persistence period of 12 to 24 hours is recommended, except in critical time periods, such as the end of a quarter, when you may want a more rapid response between the Siebel operational applications screens and Siebel Analytics screens.

To change the cache expiry or persistence period, see the section in *Siebel Analytics Server Administration Guide* regarding Siebel Analytics Server cache.

Upgrading Earlier ERM Data

A registration is needed to capture a training user's organization for the Workforce Training Subject Area. This set of workflows and tables governing this process is available only in ERM 7.5.

In order to analyze training based on Organization from previous ERM installations, you must run a script to populate the new S_SRCEVT_REG_NQ table. (However, all past training data on all dimensions *except* Organization can be analyzed without running the script.)

Before running the script, these caveats must be understood:

- In Siebel ERM 7.5, the S_SRCEVT_REG_NQ table captures the organizational hierarchy each time an employee registers for a training class. For all registrations in Siebel ERM versions prior to 7.5, the organizational hierarchy was not captured, and therefore not known. If you add any data to the S_SRCEVT_REG_NQ table, you are associating all courses for a specific employee with that employee's current organization—not the historical organization. It is therefore recommended that you not analyze older registration data based on organization, as it would lead to false queries.
- If the user does not register for the training, no organization-based information is captured. Therefore, any queries for employee and organization result only in employees who have registered for a course, and their organizations.

To analyze older Siebel ERM data by organization

- 1 For each registration (ROW_ID) in S_SRC_EVT_REG, there is a PERSON_ID. Follow the joins below to get the division (internal organization) for that person:

| | |
|-------------------------|-------------------|
| S_SRC_EVT_REG.PERSON_ID | S_CONTACT.ROW_ID |
| S_CONTACT.ROW_ID | S_POSTN.PR_EMP_ID |
| S_POSTN.OU_ID | S_ORG_EXT.ROW_ID |
| S_ORG_EXT.NAME | division name |

- 2 Once you know the Division Name for that specific person, query the S_SRC_EVT_REG table for all Registrations for that person.
- 3 Capture all of these Registrations (S_SRC_EVT_REG.ROW_ID).

- 4** Add a row for each of these in S_SRCEVT_REG_NQ, so that
S_SRC_EVT_REG.ROW_ID = S_SRC_EVT_REG.PAR_ROW_ID.
- 5** Populate all the Siebel-required fields in S_SRCEVT_REG_NQ and the
CUR_ORG_NAME field with the division name.

The hierarchy is not known at the time of the registrations, so the other fields should not be populated.

Siebel Industry Applications Analytics Metadata **10**

Siebel Industry Applications Analytics serve the following industries: Communications, Media, and Energy (CME), Consumer Sector, Life Sciences, Automotive, Financial Services, and Homeland Security.

Siebel Industry Applications are shipped with certain Siebel Analytics metadata. This chapter covers the Siebel Analytics metadata for Siebel Industry Applications, especially those areas for which a Siebel administrator may need to adjust Siebel Analytics or the Siebel operational application for specific Analytics purposes, specifically in the areas of:

- Dashboard content of Siebel Industry Applications Analytics
- Metadata requirements for Siebel Industry Applications Analytics

About Siebel Industry Applications Analytics Metadata

This section covers data setup that needs to be done properly in the Siebel transactional database for it to be displayed accurately in Siebel Analytics. This section also covers troubleshooting issues related to applications metadata.

Disabling the eFinance Logical Table Sources

Before using any Siebel Industry Applications *other than* Siebel eFinance Analytics, Siebel eHealthcare Analytics, or Siebel eInsurance Analytics objects, you must update the Logical Table sources in the Siebel Analytics repository file.

These Logical sources must be deactivated in order for your Siebel Industry Applications Analytics reports to point to the right logical model and retrieve the correct data. Do this by deactivating the W_ASSET_F (FINS) source for the logical table FACTS in the core subject area.

NOTE: Before performing the following procedure, shut down Siebel Analytics Server.

To disable Logical Table sources for Siebel Industry Applications

- 1** Launch Siebel Analytics Administration Tool and open Siebel Analytics Repository (SiebelAnalytics.rpd).
- 2** Go to the Business Model and Mapping window (the logical layer window) and open the Core folder.
- 3** Scroll down to the Fact-Asset logical table and open its Sources folder.
- 4** In the list of logical table sources, right-click W_ASSET_F (FINS).
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.
- 6** Click on OK and save the repository.
- 7** Restart Siebel Analytics Server.

Siebel eFinance Analytics

Before using Siebel eFinance Analytics, Siebel eHealthcare Analytics, and Siebel eInsurance Analytics objects, you must update the Logical Table sources in the Siebel Analytics Repository file. These Logical sources must be deactivated in order for Siebel eFinance Analytics, Siebel eHealthcare Analytics, and Siebel eInsurance Analytics reports to point to the right logical model and retrieve the correct data. Do this by deactivating the W_ASSET_F source for the logical table FACTS in the core subject area.

To update Logical Table sources for eFinance Analytics

- 1** Shut down Siebel Analytics Server.
- 2** Launch Siebel Analytics Administration Tool and open Siebel Analytics Repository (SiebelAnalytics.rpd).
- 3** Go to Business Model and Mapping window (the logical layer window) and double-click Core to open it.
- 4** Scroll down to the Fact-Asset logical table and open the Sources folder.
- 5** Scroll down to W_ASSET_F in the list of logical table sources, right-click it and select Properties.
- 6** Click the General tab in the Properties window.
Make sure the Active check box is checked. If it is not, check it.
- 7** Click on OK, save the repository, and restart Siebel Analytics Server.

Financial Services Translation Strings

The Financial Services applications use a different set of translation strings from other Siebel eBusiness 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 Analytics Administration Tool.
- 2** Select the entire presentation layer and right-click the mouse to display the menu.

3 Choose Externalized Metadata Strings.

With this configuration, all metadata strings are read from an external Siebel operational application database, specifically from the table S_MSG.

4 Make sure that the connection pool Externalized Metadata Strings points to the Siebel operational application database and is working correctly.

5 Go to the Manage Variables menu and locate the initialization block External Metadata Strings.

6 Double-click on the initialization block to open the Edit window.

7 In the Initialization SQL area, change the SQL:

from

```
select MSG_NUM, MSG_TEXT
from VALUEOF(TBO).S_MSG
where MSG_TYPE = 'Metadata' and
LANG_ID = decode( 'VALUEOF(NQ_SESSION.LOCALE)' ... [more]
```

to

```
select MSG_NUM, MSG_TEXT
from VALUEOF(TBO).S_MSG
where MSG_TYPE = 'FINS_Metadata' and
LANG_ID = decode( 'VALUEOF(NQ_SESSION.LOCALE)' ... [more]
```

8 Click OK to commit the changes and save the repository.

9 Restart the Siebel Analytics Server.

Consumer Sector

Siebel eConsumer Goods Sales Analytics extends the base Sales Analytics application to include Trade Funds Management analytics, Trade Promotion Evaluation analytics, Sales Performance analytics, and Retail Audit analytics.

All Consumer Goods specific metadata has been added to a single subject area. In the Siebel Administration Tool, this metadata is tagged with a red apple icon. The following section covers each fundamental area of Consumer Goods analytics and provides tips for data entry for effective analytics.

The Consumer Goods dashboards and pages available to the end user are described in [Table 33](#).

Table 33. Consumer Goods Dashboards and Page Tabs

| Dashboard | Page | Function |
|--------------|-------------------|--|
| Retail Audit | Last Audit | Shows the aggregated results of the last audit, defined the last time a product was audited at a specific account and merchandising location. The aggregated metrics can be drilled into to get a list of accounts or products to target future efforts. |
| | Trends | Displays key metrics captured in a retail audit over time across accounts or product categories. |
| | Position | Combines account and product performance with the individual representative responsible. |
| Promotion | Plan Year To Date | Displays both individual promotional performance with cumulative trends to provide overall perspective on meeting promotional targets. |
| | Key Accounts | Shows post promotion evaluation from a key account perspective across several levels of detail including plan, promotion, or promoted product detail. |
| | Corporate | Shows post promotion evaluation from a brand managers perspective, by evaluating corporate promotions. |

Table 33. Consumer Goods Dashboards and Page Tabs

| Dashboard | Page | Function |
|-------------------|-----------------------|--|
| 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 including what percentage of total sales is in each category? What products are selling where by whom? |

Table 33. Consumer Goods Dashboards and Page Tabs

| Dashboard | Page | Function |
|---------------------|----------|---|
| Key Account Manager | Account | This page focuses on answering key business questions of a key account manager including how I am performing versus my account plan? What is my promotional forecast accuracy? What funds are available to plan additional retail activity? |
| | Category | This page focuses on answering key product questions of a key account manager including which category is best promoted at my accounts? How are my store conditions trending? Are out of stocks preventing me from reaching my targets? |

The data requirements for the Consumer Goods–specific portion of the data model are detailed in [Table 34](#). This includes the fund, promotion, performance and retail audit schema.

Table 34. 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 34. Data Requirements for Consumer Goods Schema

| Page | Function |
|--------------|--|
| Performance | <p>Sales Performance analytics is used primarily in conjunction with the category product hierarchy as defined by Siebel Sales Volume Planning. To create the category-product hierarchy, the SVP adopt flag must be selected in order to aggregate product data up the category product hierarchy. This flag can be found by navigating to Catalog Administration > SVP Category Details View > Products applet.</p> <p>The data warehouse and all prebuilt analyses are built from the end date of a period. To make sure data is accurate, the periods in the Siebel transactional database tables must be of a single duration. If they are different, inaccurate data could be stored in the data warehouse. For example, if a week and a month end on the same date, the actual shipped quantities are combined during the building of the data warehouse.</p> |
| Retail Audit | <p>The Last Audit Flag is set during the ETL process. The flag is set to Yes for the most recent record for a product at an account and merchandising location. All other audit records for that combination of product, account, and merchandising location are set to No.</p> <p>The observation date is used to sort the retail audit records to determine which is the last audit. The observation date is populated when the status of a retail audit activity is changed to Done. The field observation date does not show up in the Siebel transactional database user interface and does not have to be the same as the activity date.</p> |

Communications, Media, and Energy (CME)

Communications, Media and Energy industry-specific analytics dashboards and pages are shown in [Table 35](#).

Table 35. 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 35. Communications, Media and Energy Dashboards and Page Tabs

| Dashboard | Page | Function |
|--------------------|------------------------|---|
| Account Management | Sales Portal | Identifies top accounts, and related top products, based upon order revenue and order volume. |
| | Service Activations | Charts trends of account service activations, and indicates top accounts based on service activation performance metrics. |
| | Service Modifications | Charts trends of account service modifications, and indicates top accounts based on service modification performance metrics. |
| | Service Disconnections | Charts trends of account service disconnections, and identifies accounts with the highest volume of disconnections. |
| | Trouble Tickets | Provides trouble ticket trending charts, and performance indicators, for particular accounts, and for accounts with selected common characteristics. |
| | Customer Satisfaction | Provides customer satisfaction trending charts, and performance indicators, for particular accounts, and for accounts with selected common characteristics. |

To support these industry-specific dashboards, Communications, Media and Energy (CME) Analytics contains corresponding industry-specific metadata. 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 18](#). These responsibilities also determine what subject areas the user may access.

The data requirements for each of the Communications, Media and Energy dashboards are detailed in [Table 36](#).

Table 36. 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 “Predictive Analytics Metadata” on page 271 for more information. |
| Revenue Management | This dashboard uses data generated by Siebel Communications, Media and Energy order management and interactive selling functionality. No specific data requirements are required beyond the data generated from these Siebel modules. This dashboard uses the Siebel Analytics Orders and Products subject areas. |
| Account Management | This dashboard uses data generated by Siebel Communications, Media and Energy order management, interactive selling, and service functionality. No specific data requirements are required beyond the data generated from these Siebel modules. This dashboard uses the Siebel Analytics Orders, Products, Service Request and Customer Satisfaction subject areas. |

Predictive Analytics Metadata

The Loyalty Management Dashboard and several Siebel Analytics subject areas use customer scores generated from a third-party predictive modeling application. A predictive modeling application uses mathematical models to predict customer behavior. For customer scoring to be made available for analysis in Siebel Analytics, CME metadata is provided which maps these customer scores to dashboards and subject areas. Relevant predictive scores available include:

- Churn Score
- Customer Value Score
- Upsell Score

- Cross-Sell Score
- Financial Risk Score

To facilitate customer segmentation in Siebel Analytics, the following metadata fields group these scores into score ranges:

- Churn Score Range
- Customer Value Score Range
- Upsell Score Range
- Cross-Sell Score Range
- Financial Risk Score Range

While the majority of predictive analytics metadata resides in the Customers subject area, some of it resides in other subject areas as well.

The process of developing and deploying these predictive scores is as follows:

- 1** Generate these scores using any third-party predictive modeling application. This is performed outside of the Siebel operational application.
- 2** Integrate the scores into the Siebel transactional database. Once this is completed, scores may be viewed in the Siebel operational application by accessing the Accounts > Profiles > Loyalty Profile view.
- 3** Load the integrated scores into the Siebel Data Warehouse during the extraction, transformation, and loading (ETL) process.
- 4** Once these scores are loaded into the Siebel Data Warehouse, they are mapped to the following Siebel Analytics metadata fields:
 - Churn Score
 - Customer Lifetime Value Score
 - Upsell Score
 - Cross-Sell Score

- Financial Risk Score

In conjunction with other associated metadata, these fields are primarily used to populate the Loyalty Management dashboard.

Other CME Metadata

Other metadata unique to CME are:

- Account Class
- Revenue Type
- Service Type
- Product Type
- Price Type
- Action Type (for Quote and Order line items)
- CME Order # of Occurrences
- CME Quote # of Occurrences

Order Management Analytics Considerations

Siebel Communications, Media and Energy (CME) makes use of order management functionality configured for CME. For Siebel CME Analytics to fully reflect the information collected by CME order management functionality, some extensions to the Siebel CME Analytics application may be required. This section explains these potential extensions.

NOTE: For more information, see release notes documentation for Siebel Communication, Media and Energy Analytics, and Siebel Interactive Selling Suite Analytics.

Siebel Sales Orders include complex products and simple products.

Complex products are comprised of a series of products, related by a product hierarchy. The highest product in the hierarchy is the root product, and the lower level products are the child products. In complex products, revenue figures are summed and roll-up to the root product using the `ROLLUP_NET_PRI` field. For a complex product, Siebel Analytics examines only the root product when computing revenue. Child products are disregarded because their revenue is already reflected in the root.

Simple products by nature include only a root product. Siebel Analytics examines this root product when computing revenue, and nothing more.

Siebel Communications, Media and Energy order management functionality supports products which have recurring charges over time (for example, \$20 per month for 12 months), one-time charges (for example, one-time purchase price of equipment), and usage charges (for example, 15 cents per minute).

The revenue attributed to a product with recurring charges is valued by taking the product's net price and multiplying it by the number of months that product is anticipated to be active, as represented by the `Number of Revenue Occurrences` field. This field, contained in Quote Item and Order Item records, is contained in the Siebel Data Warehouse by the following fields:

- `W_QUOTEITEM_F.NUM_OCCURRENCE`
- `W_ORDERITEM_F.NUM_OCCURRENCE`

In Siebel CME Analytics, revenue metrics do not automatically account for all recurring charges, and do not consider the `NUM_OCCURRENCE` fields. Instead, Siebel CME Analytics revenue metrics incorporate one-time charges, one-month's worth of recurring charges, and no usage charges. To incorporate the anticipated value of all recurring charges, the `W_QUOTEITEM_F.NUM_OCCURRENCE` and `W_ORDERITEM_F.NUM_OCCURRENCE` fields may need to be incorporated into revenue calculations made during the Extraction, Transformation and Load (ETL) process for order item and line item records.

Alternatively, these fields in the Siebel transactional database, representing the aggregated recurring and one-time product charges, may be used and incorporated into the ETL processes:

- `S_ORDERITEM.PER_MTH_CHG_SUBTOT`
- `S_ORDERITEM.ONETIME_CHG_SUBTOT`

- S_QUOTEITEM.PER_MTH_CHG_SUBTOT
- S_QUOTEITEM.ONETIME_CHG_SUBTOT

Each CME Order line item and Quote line item contains an Action Type of Add, Update, or Delete. Because Siebel Analytics only looks at root product line items, only the Action Types associated with the root product 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 consideration 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.

Life Sciences

This section covers these topics:

- Configuring dimensions common to all subject areas
- Configuring dimensions specific to specific subject areas:
 - [“Pharma Sales Effectiveness” on page 278](#)
 - [“Product Categories” on page 279](#)
 - [“Pharma Promotional Effectiveness” on page 279](#)
 - [“Pharma Promotional Effectiveness” on page 279](#)
 - [“Pharma Medical Education Effectiveness” on page 280](#)
 - [“Pharma Customer Demographics” on page 280](#)
 - [“Pharma Objectives Achievement” on page 280](#)

Common Dimensions

These dimensions are used in all subject areas:

- [“Positions Dimension”](#)
- [“Alignments Dimension” on page 277](#)
- [“Products Dimension” on page 278](#)
- [“Product Costs Dimension” on page 278](#)

Positions Dimension

A sales territory is defined in Group Administration–Positions by a Siebel position. Creating parent positions creates the sales force hierarchy. Up to 10 levels of sales force hierarchy are supported by the application. Employees should be assigned to positions to populate employee hierarchy.

Position Types need to be set up according to compensation type (Rx or sales) only at the sales territory level. A district manager does not need to have a Position Type assigned to it. Sales Allocation needs to be exposed on the list applet to enter script compensation percentages (Rx or Sales) associated with each territory. For example, if all sales representatives receive 100% of the Rx on a ZIP Code, no action is needed or Position Type = Sales Representative can be assigned to the position.

Seed data on the Position Type list of values has been enhanced to include types for mirror, job share, and swat. Typically, both mirror and job share represent a position that receives less than 100% of the total scripts on a ZIP Code.

Alignments Dimension

A sales territory alignment is the relationship of ZIP Code-to-territory or brick-to-territory. The alignment relationship is created in Siebel Assignment Manager under Assignment Administration–Territories, as shown in [Table 37](#).

Table 37. 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 38](#).

Table 38. Customer Products Predefined Product Types

| Product Level | Product Type | Example |
|---------------|--------------|---------------|
| 3 | Sample | Aracid 400 MG |
| 2 | Detail | Aracid |
| No Level | Sub Market | COPD |
| 1 | Market | Asthma |

NOTE: Competitive products should use the product type Competitor. Competitor product hierarchies are set up using parent product relationships exclusively and should not have product levels assigned to them.

Product Costs Dimension

Product costs for customer products (that is, products of the company that licensed the software) require population in the Product Administration, Product Form Applet, as shown in [Table 39](#).

Table 39. Product Costs For Customer Products

| Product Type | Field to be Populated |
|-----------------------|-----------------------|
| Sample | Sample Cost |
| Detail | Avg. Promo Cost |
| Promotional Item Cost | Sample Cost |

Pharma Subject Areas

This section discusses the subject areas used by ePharma Analytics.

Pharma Sales Effectiveness

This subject area is focused on syndicated data analytics.

The specific configuration required for the S_SYND_DATA table depends on your data types, and the Analytics application and reports that you have licensed. The Data Loading Matrix table in *Siebel Data Warehouse Installation and Administration Guide* is the basis of prebuilt reports. The syndicated data loading matrix populates both base and derived metrics used in pharmaceutical sales analytics.

Product Categories

Siebel Pharma Analytics supports custom and prebuilt product category trees to allow rollup of syndicated data by alternative hierarchies. To populate a custom category, first create a Catalog in Catalogue Administration, and create categories and sub categories as part of the catalogue. [Table 40](#) lists the categories that need to have the Usage Type field populated in the Catalog Admin Category Detail Applet.

Table 40. Hierarchy Categories to be Populated in Pharma Analytics

| Usage Type Code | Hierarchy Category |
|------------------|---|
| ATC | Anatomical Therapeutic Class |
| Chemical | Chemical |
| Application Form | Product application |
| USC | User-defined codes and custom hierarchies |

Pharma Promotional Effectiveness

This subject area combines call activity data with syndicated data to analyze effectiveness of call activity.

Call Activity analysis records are derived from submitted call activity records stored in S_EVT_ACT in the Siebel transactional database, where they are stamped with the ZIP Code or brick where the activity took place—that is, the Contact primary address’s ZIP code/brick or the Account ZIP Code/brick. Allocation of these ZIP Code/brick records should be done by Assignment Manager rules to make sure that they are correctly allocated. Assignment Manager rules must match the Contact or Account primary address ZIP Codes or bricks. Otherwise, data integrity is not maintained.

Only calls that have status Submitted on the Pharma Professional Call Form Applet are brought over from the Siebel transactional database to the Siebel Data Warehouse.

Pharma Medical Education Effectiveness

This subject area combines measures from MedEd and Syndicated Data to measure effectiveness of medical education events used on medical education analytics.

Only MedEd events with the status Completed on the Pharma ME Event List Applet are extracted from Siebel transactional database to populate the Siebel Data Warehouse.

MedEd Event costs are based on costs of activities in the Pharma ME Event Activity List Applet. Costs are allocated based on MedEd Team cost allocation, and promoted products Cost Allocation on the MedEd event.

Costs are solely based on physician invitees with the status Attended in the Pharma ME Event Professional Invitee Session List Applet.

Control groups are based on physicians who have the same contact ranking as attendee physicians within the same sales territory at the time of the event, but who did not attend the event.

Pharma Customer Demographics

This subject area supplies denormalized table for contact and account profiling. It is typically loaded from external sources and contains the master contact list. Prebuilt ETL extracts the contact list from Siebel.

Pharma Objectives Achievement

This subject is used to measure achievement and results for pharma call activity and Rx/sales targets. It is based on Pharma Objectives.

Objectives need to have a Unit populated in Retail Objective Form Applet. Actual target numbers per contact and account need to be populated in the Pharma Campaign Target Account List Applet or the Pharma Campaign Target Professional List Toggle Applet.

Internationalization Considerations **11**

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 applications if you intend to deploy them in one or more language environments besides English. In order to support multiple languages, the Siebel Analytics Server must be set up appropriately.

A Note on Unicode Support

Siebel Analytics itself supports Unicode. However, some third-party products and platforms may not fully support Unicode. For example, Corda version 3.8.3 (the engine for displaying charts in Analytics Web) is unable to show East-Asian characters in its standard mode. This capability can be provided, however, in a non-drillable mode requiring advanced setup.

Installing Localization Packs for Analytics

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

Changing Localization Variables in the Siebel Analytics Repository

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

To configure localizations in the Siebel Analytics repository

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

| Variable Type | Variable Name | Change to ... |
|--------------------|----------------------------|--|
| Repository—Dynamic | OLTP_LANG_ID | Siebel three-letter language code |
| | DW_CURRENCY | OLTP Currency (for example, EUR) |
| | ETL Base Exchange Currency | OLTP Currency (for example, EUR) |
| Session—System | LOCALE | Siebel Analytics two-letter language code (shown in the LOCALE parameter entry of Chapter 4, “NQSCONFIG.INI File Reference.”) |

About 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 for the first time to Answers, the value for WEBLANGUAGE is French, and the metadata is translated into 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.

Changing Configuration 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, and 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 section [“SORT_ORDER_LOCALE on UNIX Operating Systems”](#) in Chapter 4, [“NQConfig.INI File Reference.”](#)

Maintaining Translation Tables

The Siebel Analytics Presentation layer supports multiple translations for any column name. When working with Answer 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 Analyst-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, refer to *Siebel Analytics Web Administration Guide*.

Externalizing Metadata Strings

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

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

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

To externalize metadata strings in the Siebel Analytics repository

- 1 Stop the Siebel Analytics Server.
- 2 Open SiebelAnalytics.rpd using the Siebel Analytics Server Administration Tool in offline mode.
- 3 Select the entire Presentation layer and right-click the mouse to display the menu.

- 4 From the pop-up menu, select Externalize Display Names .

A check box appears next to this option the next time you right-click on the Presentation layer. When Externalize Display Names is checked, all metadata strings are read from an external Siebel operational application database, specifically from the S_MSG table.

- 5 Make sure that the connection pool Externalized Metadata Strings points to the Siebel operational application database and is working correctly.
- 6 Restart the Siebel Analytics Server.

Checking the Execution Order of Initialization Blocks

This section is for 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 shows 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. Exit the Server Administration Tool.
- 6 Restart the Siebel Analytics Server.

Using the Externalize Strings Utility for Localization

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

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

To perform the string translation process using Externalize Strings

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

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

Adding Custom Translations to S_MSG Table

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

If you do not externalize the display names, you do not need to perform the following procedure. However, the custom Presentation layer objects show up only in the native language of the metadata (the language in which you added these new objects).

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

To add LOV values for Siebel Analytics

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

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

All other fields should be default.

- 5** Add one more record, depending on your deployment, with the following values.
 - Financial Services applications only:

| Value Name | Value Entry |
|----------------------------|--------------------|
| Type: | MESSAGE_LEVEL |
| Display Value: | FINS_Metadata |
| Language-independent Code: | FINS_Metadata |
| Active: | check mark |

| Value Name | Value Entry |
|----------------|---|
| Language Name: | [Choose your deployment language] |
| Description: | Analytics Financial Services Metadata Strings |

- All other applications:

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

To add string translations for Siebel Analytics metadata

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

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

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

- 4** Select your deployment language.
- 5** Choose the Message type—Metadata or FINS_Metadata, depending on which one was added in [Step 5](#) of the procedure on adding LOV.

- 6 Select AnalyticsNew Message Level.
- 7 In the Message Text column, add the translation of the object.
- 8 Translate & Active Flags should be on.
- 9 Error Message # is 0.
- 10 Set the Message Facility to SIA if you are using the Siebel Financial Services application. Otherwise, set it to HORZ.
- 11 Repeat Steps 2–10 for each new metadata object string.
- 12 Restart the Siebel Analytics Server.

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, refer to *Siebel Analytics Web Administration Guide*.

Custom Labels

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

To edit the custom labels

- 1 Log 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.

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

This appendix covers the process of customizing your Siebel Analytics application's home page and dashboards, and the Analytics subject areas relevant to your Siebel operational application.

Customizing the Analytics Content on the Siebel Operational Application Home Page

Siebel Analytics applications are integrated with Siebel eBusiness applications using the symbolic URL infrastructure. The following section explains how to use symbolic URLs to link a new report to a Siebel operational application home page and how to add new Analytics Dashboards to the Siebel operational application.

NOTE: For more information on the symbolic URL infrastructure, refer to *Siebel Portal Framework Guide*. This section assumes that you have successfully built a symbolic URL to link some external content, using the instructions given in *Siebel Portal Framework Guide*.

For each Analytical report on a Siebel operational application home page, there is a symbolic URL record defined that links the applet to the Analytics report. If you have not already done so, you need to create a new Homepage applet and set it up to use a symbolic URL.

To configure a new Home Page applet to use a symbolic URL

- 1** Make sure the symbolic URL has been set up.
- 2** Launch the Siebel operational application and navigate to the Integration Administration > Symbolic URL Administration view.

3 Query for the symbolic URL that has been set up for Analytics.

The name of this symbolic URL should be exactly the same as the calculated value of the field that was added to the Business Component. For example, you may have a symbolic URL named HomePageAnalytics.

4 In the URL field, enter the Web URL:

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

For the Host Name, choose the Analytics Server Name with the pick applet from the list. NQHOST in the URL is a virtual name that points to the Analytics Web machine. The other parameters are:

- Fixup Name: Inside Applet
- SSO Disposition: Inline
- Analytics Web application name: Select from the pick list

5 Create the appropriate symbolic URL Arguments.

These arguments depend upon the particular Analytics report that you are trying to display. The symbolic URL arguments should be as shown in [Table 41](#).

Table 41. Symbolic URL Arguments for Reports

| Name | Registered | Type | Path Argument Value | Append | Sequence # |
|------------|------------|----------|--|--------|------------|
| Cmd | Y | Constant | Go | Y | 1 |
| Path | Y | Constant | /shared/Sales/Pipeline/Overview/Top 10 Deals | Y | 2 |
| Syndicate | Y | Constant | Siebel | Y | 3 |
| nQUser | Y | Command | UseSiebelLoginId | Y | 4 |
| nQPassword | Y | Command | UseSiebelLoginPassword | Y | 5 |

The Argument Values should be the same for any Analytics report you work with, except for the Path Argument Value. The Path argument tells the symbolic URL the path to the report on the Analytics Web. To determine the path to the report, log on to your Analytics Web as an Administrator. In Siebel eBusiness Applications, you can access this view through Answers > Siebel Analytics Web Administration. Select Manage Analytics Catalog, then navigate to your report. The full path for the report in our example is */shared/Sales/Pipeline/Overview/Top 10 Deals*. Add this path name to the Symbolic URL argument.

Adding Views for Custom Analytics Dashboards

This process is similar to that of adding Siebel Analytics reports to the home page:

- First, using Siebel Tools, set up a new view.
- Then, in the operational application, define a symbolic URL for that view.

For more information on how to set up a view to use Symbolic URLs, refer to *Siebel Portal Framework Guide*.

To configure the symbolic URL for Analytics dashboards

- 1** Define a Symbolic URL.
 - a** Navigate to Site Map > Integration Administration > Symbolic URL Administration.
 - b** In the Symbolic URL Administration view, add a new record.
- 2** Define Symbolic URL arguments.
 - a** Navigate to Symbolic URL Administration.
 - b** In the Symbolic URL Administration applet, select the Symbolic URL you want to configure.

- c In the Symbolic URL Arguments applet, enter the arguments that need to be sent to the external host.

The symbolic URL definitions are:

- Fixup Name: Default
- SSO Disposition: IFrame

NOTE: The SSO Disposition is IFrame and not Inline as in the case of the applet.

- Analytics Web application name: Select from the pick list.

The arguments to be used for the symbolic URLs are shown in [Table 42](#).

Table 42. Symbolic URL Arguments for Dashboards

| Name | Registered | Type | Value | Append | Sequence # |
|------------|------------|----------|-------------------------------------|--------|------------|
| Cmd | Y | Constant | PortalPages | Y | 1 |
| PortalPath | Y | Constant | /shared/Executive/_Portal/Executive | Y | 2 |
| nQUser | Y | Command | UseSiebelLoginId | Y | 3 |
| nQPassword | Y | Command | UseSiebelLoginPassword | Y | 4 |

Note that *cmd* argument value is different and is PortalPages now. Also, the PortalPath is the path to the Dashboard, not the path to the report. You can get the path the same way as you would get the path to the report through Siebel Analytics Web.

- 3 In Siebel Analytics, create the dashboards.

NOTE: Only a Siebel Analytics Web administrator can perform this step.

- 4 In Siebel Analytics, set up the dashboards to your requirements.

Analytics Subject Areas for Siebel Operational Applications

This section contains [Table 43](#), showing the relevant Analytics subject areas for Siebel operational applications (Siebel eBusiness Applications and Siebel Industry Applications).

Table 43. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|------------------------|------------------------|
| Incentive Compensation | Incentive Comp |
| Automotive | Service Requests |
| | Vehicle Sales |
| Communications | Customer Satisfaction |
| | Customers |
| | Orders |
| | Products |
| | Service Requests |
| Consumer Sector | Consumer Sector |
| Enterprise Visibility | Enterprise Visibility |
| Workforce Analytics | Service Requests |
| | Workforce Performance |
| | Workforce Summary |
| | Workforce Training |

Table 43. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|-----------------------|-------------------------------------|
| Executive Analytics | Campaigns |
| | Customer Satisfaction |
| | Forecasting |
| | Orders |
| | Partners |
| | Pipeline |
| | Products |
| | Service Requests |
| | Workforce Performance |
| | Workforce Summary |
| | Workforce Training |
| Financial Services | Activities |
| | Campaigns |
| | Consumers |
| | Customer Satisfaction |
| | Customers |
| | Financial Accounts and applications |
| | Insurance Claims |
| | Insurance Policies |
| | Pipeline |
| | Service Requests |

Table 43. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|-----------------------------|-------------------------------|
| Product Sales Effectiveness | Agreement Details |
| | Agreement Overview |
| | Consumers |
| | Customer Satisfaction |
| | Orders |
| | Pricing |
| | Products |
| | Quotes |
| | Service Requests |
| Marketing Analytics | Campaigns |
| | Consumers |
| | Customers |
| Partner Analytics | Activities |
| | Campaigns |
| | Customer Satisfaction |
| | Customers |
| | Orders |
| | Partner Training |
| | Partners |
| | Pipeline |
| | Service Requests |

Table 43. Analytics Subject Areas for Siebel Applications

| Analytics Area | Relevant Subject Areas |
|-----------------------|--|
| Pharmaceuticals | Pharma Medical Education Effectiveness |
| | Pharma Objective Achievement |
| | Pharma Promotional Effectiveness |
| | Pharma Sales Effectiveness |
| | Rx Sales |
| Sales Analytics | Customers |
| | Forecasting |
| | Orders |
| | Pipeline |
| | Products |
| | Activities |
| | Agreement Details |
| | Agreement Overview |
| Service Analytics | Assets |
| | Consumers |
| | Customer Satisfaction |
| | eMail Response |
| | Orders |
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| | UQ Alarms |
| | UQ Employee Work Item Statistics |
| | UQ Route and Channel Statistics |

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