Siebel Installation Guide for UNIX: Servers, Mobile Web Clients, Tools

Version 7.8, Rev. A

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1 What's New in This Release

Siebel Installation Guide for UNIX: Servers, Mobile Web Clients, Tools covers the installation of all essential core products for Siebel Business Applications or Siebel Industry Applications, including servers, Siebel Mobile Web Clients, Siebel Tools, Reports Server, and other modules.

What's New in the Siebel Installation Guide for UNIX: Servers, Mobile Web Clients, Tools, Version 7.8, Rev. A

Table 1 lists changes in this version of the documentation to support release 7.8 of the software.

Table 1.   New Product Features in Siebel Installation Guide for UNIX, Version 7.8, Rev. A

Topic	Description
Chapter 4, "Creating the Siebel Installation Image on the Network" Chapter 9, "Installing the Siebel Web Server Extension" *System Requirements and Supported Platforms* on Siebel SupportWeb	Web server platform support changes for Siebel Business Applications: ■ *IBM HTTP Server support on Linux servers has been withdrawn.* (This platform was documented in the previous 7.8 version of this guide.)
"About Installing in Upgrade Environments" on page 16	Added new topic.
"Planning RDBMS Installation and Configuration" on page 22	Updated topic.
"Specifying the Locale for Siebel Applications" on page 26	Added new topic.
"Guidelines for Setting DB2 UDB Configuration Parameters" on page 42	Updated the descriptions and recommendations for the parameters ESTORE_SEG_SZ and NUM_ESTORE_SEGS for DB2 UDB databases.
"Guidelines for Configuring Settings in the init.ora File" on page 54	Updated descriptions and recommendations for several parameters for Oracle databases.
"Siebel Server Installation Requirements" on page 112	For AIX, added mention of X11 filesets requirement (removed mention from Siebel Gateway Name Server installation chapter).
"Preparing to Run Siebel Server Components After Installing" on page 129	Added topic to consolidate new and existing information related to running Siebel Server components.

Table 1.   New Product Features in Siebel Installation Guide for UNIX, Version 7.8, Rev. A

Topic	Description
"Setting the Siebel Server Locale"	Deleted obsolete topic from Siebel Server installation chapter. Information is now found in other topics.
Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database"	Updated several topics in this chapter and modified the chapter structure. For example: ■ Added information about which topics apply in upgrade scenarios. ■ "Installing Multilingual Seed Data for the Siebel Database" has been removed. This add language scenario is now addressed in the topic "Installing the Siebel Database Components" on page 158. ■ "Importing a New Language to the Repository" has been removed. This add language scenario is now addressed in the topic "Importing the Siebel Repository for the Siebel Database" on page 165.
"About Customizing the Siebel Client Installer" on page 194	Added new topic.
"Verifying ODBC Data Sources for the Siebel Mobile Web Client and Developer Web Client" on page 208	Updated topic.
"Defining the External Host and Symbolic URLs" on page 240	Added new procedure for configuring symbolic URLs to use HTTPS.
Chapter 16, "Verifying Your Server Environment"	Updated several topics in this chapter about using the Environment Verification Tool (EVT).

What's New in the Siebel Installation Guide for UNIX: Servers, Mobile Web Clients, Tools, Version 7.8

Table 2 lists changes in this version of the documentation to support release 7.8 of the software.

Table 2.   New Product Features in Siebel Installation Guide for UNIX, Version 7.8

Topic	Description
System Requirements and Supported Platforms on Siebel SupportWeb	UNIX operating system platform support changes for Siebel Business Applications: ■ Sun Solaris 8 is no longer supported
Chapter 3, "Configuring the RDBMS" Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database" *System Requirements and Supported Platforms* on Siebel SupportWeb	RDBMS platform support changes for Siebel Business Applications: ■ Oracle 8*i* is no longer supported; Oracle 10*g* is now supported ■ IBM DB2 UDB V7 is no longer supported
"Planning RDBMS Installation and Configuration" on page 22	IBM DB2 UDB for z/OS and OS/390 is now referred to as IBM DB2 UDB for z/OS.
Chapter 4, "Creating the Siebel Installation Image on the Network" Chapter 9, "Installing the Siebel Web Server Extension" *System Requirements and Supported Platforms* on Siebel SupportWeb	Web server platform support changes for Siebel Business Applications: ■ IBM HTTP Server is now supported on Linux servers as well as on AIX. Siebel Web Server Extension (SWSE) is now supported on Linux, to work with this Web server. *(As noted in Table 1, support on Linux servers has now been withdrawn.)*
Chapter 4, "Creating the Siebel Installation Image on the Network" Installation procedures in multiple chapters	Product files to be installed are delivered as compressed JAR files (rather than ZIP or TAR). The Siebel Image Creator utility creates network images from these JAR files. Installations must be performed from network images; direct installation from DVD is no longer supported. (ChartWorks Server is installed from TAR files, but these files are packaged using JAR files.)
"About Installing Siebel Releases" on page 15	Where available, three-digit releases such as 7.8.2 (for example) can now be installed as full installations. Alternatively, such a release can also be installed as a patch (maintenance release) to an existing installation of a prior version in the same series.

Table 2.   New Product Features in Siebel Installation Guide for UNIX, Version 7.8

Topic	Description
"About Installing Siebel Releases" on page 15 *Maintenance Release Guide* for the release to be installed as a patch	Patch installations can now be chained to base installs (or other patch installs) by configuring slipstream patch installation.
"Installing Multiple Instances of Siebel Business Applications" on page 25 "SWSE Installation Requirements" on page 172	Multiple instance support for Siebel Web Server Extension (SWSE) is now provided. Some configuration is required to support multiple instances of SWSE.
Chapter 10, "Installing Siebel Mobile Web Clients"	The Siebel Dedicated Web Client has been renamed the Siebel Developer Web Client. This client type is now supported only for development, troubleshooting, and limited administration usage scenarios.

2 Preparing for Installation

This chapter provides information to help you prepare for installing Siebel Business Applications software. This chapter includes the following topics:

- *"About the Deployment Planning Worksheet" on page 15*
- *"About Installing Siebel Releases" on page 15*
- *"About Installing in Upgrade Environments" on page 16*
- *"About Windows and UNIX Platforms" on page 17*
- *"Overview of Installing Siebel Business Applications" on page 17*
- *"General Considerations in Planning Your Siebel Deployment" on page 19*

About the Deployment Planning Worksheet

The Deployment Planning Worksheet is an integral part of the installation process.

Before proceeding, go to Appendix A, "Deployment Planning Worksheet," and make a copy of the worksheet. Using the copy, the deployment team should fill out the first section. Members of the team should fill out the information in the sections for which they are responsible. As you work through the preparation steps in this chapter, you will be prompted to record information you will need while installing and configuring Siebel Business Applications.

In subsequent chapters, you will be prompted to refer to the Deployment Planning Worksheet for specific information about your site and deployment. You will also use it to record other important information for future installations, upgrades, reconfiguration, and expansion of your deployment.

About Installing Siebel Releases

Each Siebel Business Applications software release from Siebel Systems has a specific version or release level. Full installations can be performed from any three-digit release, such as 7.8.2. A full installation is your base product installation. The procedures in this book are for performing full installations of the base products. Server products are configured after a full installation, using the Siebel Software Configuration Wizard.

Siebel Systems subsequently provides additional releases that can be installed on top of your existing base product installation. Such releases are collectively known as maintenance releases.

If you already have a base product installation, a subsequent three-digit release can be installed as a maintenance release. For example, 7.8.3, if available, could be installed on top of an existing 7.8.2 installation.

Releases that can *only* be installed as maintenance releases include Fix Pack releases (four-digit releases, such as 7.8.2.1 or 7.8.2.2) and Quick Fix releases.

Typically, no configuration tasks are associated with installing a maintenance release. You generally do not need to run the Siebel Software Configuration Wizard. However, requirements for a given maintenance release, or for using particular supported languages or features, may vary. For details, refer to the applicable *Maintenance Release Guide* on Siebel SupportWeb.

You can set up your installations so that a Fix Pack or Quick Fix release will be automatically installed immediately following a full installation of the base products, in a chained fashion. This type of installation is sometimes referred to as slipstream installation. Before you install the base products, you should note whether maintenance releases are available and consider whether to install them together in this manner. For example, if the current base release level is 7.8.2 and Fix Pack release 7.8.2.1 is available, you can install these releases together, in sequence.

All Siebel products used within a given Siebel Enterprise must share the same release level, such as 7.8.2 or 7.8.2.1.

NOTE: For detailed information about installing maintenance releases (including slipstream installation) and about the features or other changes provided in the release, refer to the applicable *Maintenance Release Guide* on Siebel SupportWeb, where it is available.

About Installing in Upgrade Environments

When you install Siebel Business Applications products, you may be creating a new deployment or you may be installing updated software to be used in a deployment that is being upgraded from a previous release of the Siebel applications—such as an upgrade from version 7.5.x or 7.7.x to version 7.8.x.

You install your Siebel software before upgrading the Siebel Database. For detailed information about upgrading the Siebel Database, and about tasks you should perform before installing or upgrading, see the *Upgrade Guide*. See also any relevant documents on Siebel SupportWeb. *Review all applicable documentation before you install or upgrade.*

CAUTION: In an upgrade environment, as part of installing Siebel software, in general, you do not perform any database-related tasks described in this book. You do, however, install the module called *Siebel Database Server* on a Siebel Server, following the procedure in "Installing the Siebel Database Server on the Siebel Server" on page 149. In particular, do *not* create the database instance on the RDBMS as described in Chapter 3, "Configuring the RDBMS," and do *not* perform the tasks described in "Configuring the Siebel Database on the RDBMS" on page 158. After the upgrade is complete, however, you may need to modify database parameters for your platform to match settings described in Chapter 3, "Configuring the RDBMS."

After installing and upgrading, some additional tasks may apply which do not apply for new installations. Some of these tasks are described in *Going Live with Siebel Business Applications*. See also "Preparing to Run Siebel Server Components After Installing" on page 129.

When you install Siebel Business Applications in some upgrade scenarios, you may choose to install different versions of a Siebel product on the same machine. For more information, see "Installing Multiple Instances of Siebel Business Applications" on page 25.

After installing the base Siebel software (such as version 7.8.2), you can install any applicable patch releases (Fix Pack or Quick Fix releases). In general, you should install such patch releases before you initiate the upgrade process. After upgrading, you can install additional patch releases when they become available.

CAUTION: After you have started upgrading, do not install any patch releases until the upgrade is complete.

For information about installing version 7.8.x patch releases, see "About Installing Siebel Releases" on page 15 and refer to the applicable *Maintenance Release Guide* on Siebel SupportWeb.

Instructions in this book apply both for new installations and upgrades, except where noted.

About Windows and UNIX Platforms

The *Siebel Installation Guide* for the operating system you are using (this book) is provided in separate versions for Windows or UNIX platforms. Both versions of this book contain information about installing client-based modules, such as Siebel Tools or the Siebel Mobile Web Client, on Microsoft Windows platforms. (The UNIX version of this book does not, however, contain information about installing server-based modules on Windows platforms.)

In this guide, the term *Windows* refers to all Microsoft Windows operating systems listed as supported (for any given Siebel product module) for this release in *System Requirements and Supported Platforms* on Siebel SupportWeb.

References in this guide to UNIX operating systems are sometimes in placeholder form, such as *UNIX_OS*. Such references, which are explained in context, may refer to the name of a supported operating system or to a directory or file naming element that corresponds to one of these operating systems.

For all supported operating system version information, refer to *System Requirements and Supported Platforms* on Siebel SupportWeb.

Overview of Installing Siebel Business Applications

The server installation process requires multiple tasks that you should perform in the following general sequence. This sequence is also illustrated in Figure 1 on page 19.

1 Planning your deployment. See the *Deployment Planning Guide*.

For example, you might install and configure server clustering software.

2 Determining your load-balancing strategy. See "Managing Load Balancing for Siebel Applications" on page 130.

3 Creating your database instance. See Chapter 3, "Configuring the RDBMS."

NOTE: You can create the database instance at any point before installing the Siebel Database Server, as described in Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database."

4 Obtaining Siebel media and creating a Siebel installation image on the network, from which installs will be performed. See Chapter 4, "Creating the Siebel Installation Image on the Network."

5 Installing required third-party products. See *System Requirements and Supported Platforms* on Siebel SupportWeb and the *Siebel Business Applications Third-Party Bookshelf.*

6 (Optional) Installing Siebel Search. See the *Siebel Search Administration Guide*.

7 Creating directories for Siebel software and the Siebel File System. See "General Considerations in Planning Your Siebel Deployment" on page 19 in this chapter.

8 Creating the required Siebel accounts. See "Creating the Siebel Service Owner Account" on page 34 in this chapter.

9 Installing and configuring the Siebel Gateway Name Server. See Chapter 6, "Installing the Siebel Gateway Name Server."

10 Creating the Siebel Enterprise Server and installing and configuring a Siebel Server. See Chapter 7, "Installing the Siebel Server."

11 Installing and configuring the Siebel Database Server on a Siebel Server machine. This task includes creating the Siebel Database itself on the RDBMS. See Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database."

12 Installing your Web server and the Siebel Web Server Extension (SWSE). See Chapter 9, "Installing the Siebel Web Server Extension."

13 (Optional) Installing Siebel Mobile Web Clients or Developer Web Clients. See Chapter 10, "Installing Siebel Mobile Web Clients."

14 Installing Siebel Tools. See Chapter 11, "Installing Siebel Tools."

15 (Optional) Installing additional Siebel Servers, if required. See Chapter 7, "Installing the Siebel Server."

16 (Optional) Installing additional Siebel products. See:

■ Chapter 12, "Installing the Siebel Reports Server"

■ Chapter 13, "Installing Siebel EAI Connector Software"

■ Chapter 14, "Installing the ChartWorks Server"

17 Verifying your environment using EVT. See Chapter 16, "Verifying Your Server Environment."
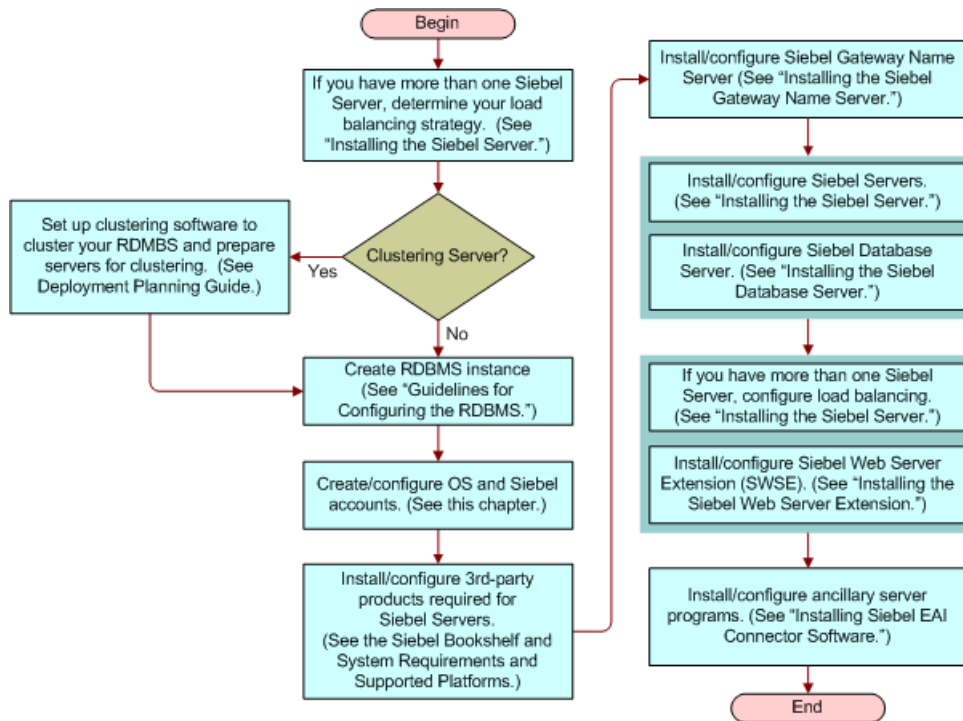
Figure 1.   Sequence of Siebel Business Applications Server Software Installation

General Considerations in Planning Your Siebel Deployment

You must plan where to install the various Siebel components on your servers. This section contains several topics about issues you must consider.

- ■ "Planning Topologies" on page 20
- ■ "Preparing the Hardware" on page 21
- ■ "Planning Siebel Server Load Balancing" on page 21
- ■ "Planning Disk Space Requirements" on page 21
- ■ "Planning RDBMS Installation and Configuration" on page 22
- ■ "Managing Siebel Image Directories and Media Files" on page 24
- ■ "Managing Temporary Disk Space Required by Installers" on page 24
- ■ "The Language in Which Siebel Installers and Wizards Run" on page 25
- ■ "Installing Multiple Instances of Siebel Business Applications" on page 25
- ■ "Specifying the Locale for Siebel Applications" on page 26
- ■ "Specifying the Locale for Your UNIX Operating System" on page 27

- ■ "Setting Permissions and Ownership" on page 29

- ■ "Installing from a Remote Server Machine" on page 29

- ■ "Siebel Server and Enterprise Server Naming Conventions" on page 30

- ■ "File and Directory Naming Conventions" on page 30

- ■ "Creating the Siebel File System" on page 31

- ■ "Creating the Siebel Service Owner Account" on page 34

Planning Topologies

You should consider running specialized components on dedicated machines. Whether you should do so depends on considerations that include available resources, overall load, and performance.

NOTE: All Siebel products used within a given Siebel Enterprise must share the same release level. For additional information about Siebel releases, see "About Installing Siebel Releases" on page 15. Third-party products must use supported release levels as documented in *System Requirements and Supported Platforms* on Siebel SupportWeb.

See also the following topics later in this chapter:

- ■ "Installing Multiple Instances of Siebel Business Applications" on page 25

- ■ "Siebel Server and Enterprise Server Naming Conventions" on page 30

- ■ "File and Directory Naming Conventions" on page 30

- ■ "Creating the Siebel File System" on page 31

Record the machine names and installation directory names you decide on in your copy of the worksheet in Appendix A, "Deployment Planning Worksheet."

For more information about planning your topologies, see the *Deployment Planning Guide*. See also the *Performance Tuning Guide*.

Planning Web Server Topology

Before you install the Siebel Web Server Extension (SWSE), as described in Chapter 9, "Installing the Siebel Web Server Extension," you must decide how you will distribute the Web servers and other components.

- ■ **Single-node.** Installation of Siebel Enterprise Server components and your Web server and SWSE on a single machine or node. (If you do this, use separate installation directories to avoid file permission problems at installation time.)

- ■ **Distributed.** Distribution of the preceding components, where multiple Web servers connect to multiple Siebel Servers in the Siebel Enterprise. These Web servers can be dynamically balanced across Application Object Manager components on different Siebel Server machines.

Each deployment choice involves trade-off. However, in enterprise-sized deployments, it is strongly recommended that you use a distributed node deployment, for the following reasons:

■ **Less resource contention.** Distributing the Web server and the Siebel Server (with Application Object Manager) on different machines eliminates contention for CPU and other server resources. However, to take advantage of the performance improvement, you must have a high-speed network connection between the two machines.

■ **Higher fault tolerance.** Operating multiple instances of components on multiple machines reduces downtime and the impact of failure on any one machine.

■ **Greater flexibility with firewalls.** Putting the Web components of the Siebel Business Applications on a different machine from the Siebel Server with Application Object Managers lets you deploy your Web server in the DMZ while keeping the Enterprise Server behind a secure firewall.

■ **High availability.** A multinode configuration is required for deployments that support large numbers of concurrent users or where high availability is an operating requirement.

For more information, see the *Deployment Planning Guide*. See also the *Security Guide for Siebel Business Applications*.

Preparing the Hardware

Verify that the hardware you have chosen meets all requirements for running your Siebel Business Applications as well as the required third-party software. Verify also that the hardware is able to support the RDBMS, Siebel File System, Siebel Gateway Name Server, Siebel Server, and Siebel Database Server software. Also plan to support Siebel Tools developer workstations and Siebel Mobile Web Clients, where applicable.

For more information, see subsequent chapters for installing the modules above. See also the *Deployment Planning Guide*.

For size limitations and information on required third-party software, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

Planning Siebel Server Load Balancing

Before you install your Siebel Enterprise Server components, you should determine your load balancing strategy for Siebel Servers. For more information, see . See also the *Deployment Planning Guide* and the *Siebel System Administration Guide*.

Planning Disk Space Requirements

Before you install, you must anticipate your disk space requirements for each installable product. Each Siebel installer displays the required disk space for the installed product before files are copied.

You must also anticipate the disk space required for Siebel image directories. For more information, see "Managing Siebel Image Directories and Media Files" on page 24 and Chapter 4, "Creating the Siebel Installation Image on the Network."

Siebel installers also have temporary disk space requirements, as described in "Managing Temporary Disk Space Required by Installers" on page 24.

Planning RDBMS Installation and Configuration

Note the following guidelines for installing and configuring the Relational Database Management System (RDBMS) on which you will create the Siebel Database.

For more information about configuring the RDBMS and the Siebel Database, see Chapter 3, "Configuring the RDBMS," and Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database."

■ Make sure that this release of Siebel Business Applications supports the exact version of your chosen RDBMS, as specified in *System Requirements and Supported Platforms* on Siebel SupportWeb, and that the RDBMS has been installed on its designated server. This server will hold the database tables containing your business data, such as sales (personnel, territories, opportunities, and activities), marketing, and customer service information.

■ Determine certain details about your RDBMS configuration for completion of the worksheet in Appendix A, "Deployment Planning Worksheet."

   ■ Verify that the network names of the servers that will support the Siebel Database and the Siebel File System are properly recorded in your copy of the worksheet. Use the machine names, not the IP addresses, for the Siebel File System names. IP addresses are not supported.

   ■ The Siebel Enterprise Server installer creates the ODBC data source name during installation, using the name SiebSrvr_*EnterpriseName*. For example, if your Siebel Enterprise Server name is Sieb78, the ODBC data source name will be SiebSrvr_Sieb78. Using this pattern, determine what your ODBC data source name will be and fill in your copy of the worksheet accordingly.

   NOTE: In most cases, you should not change any of the default ODBC settings or parameters; otherwise, you will encounter problems using the ODBC. For example, setting the OptimizeLongPerformance parameter to enable corrupts all the scripts in the repository during the import or export processes. See also topics for verifying the ODBC data source for your RDBMS platform, such as those in Chapter 7, "Installing the Siebel Server."

   Siebel client installers also create ODBC data source names during installation. The naming convention is different than ODBC data source names created by the Siebel Enterprise Server installer. For more information, see Chapter 10, "Installing Siebel Mobile Web Clients," and Chapter 11, "Installing Siebel Tools."

About Database Code Pages and Locale Support

In a database environment that is enabled for Unicode, you can install any of the available Siebel Language Packs.

However, in a database environment that is not enabled for Unicode, you must consider the correlation of the Language Packs you want to install and the characters supported by your database code page.

For example, in a Western European code page database, you can only install Western European Language Packs, such as English, French, Spanish, or German Language Packs. In a Japanese code page database, you can only install Japanese or U.S. English Language Packs.

The code page of the operating system on which your Siebel Server runs must match that of your Siebel Database instance. The languages installed on each must also match.

For a list of supported code pages and encoding strategies, see *System Requirements and Supported Platforms* on Siebel SupportWeb. See also the *Global Deployment Guide*.

See also "Specifying the Locale for Siebel Applications" on page 26 and "Specifying the Locale for Your UNIX Operating System" on page 27.

See also the topics that apply to your RDBMS platform in Chapter 3, "Configuring the RDBMS."

Planning Database Connectivity

Use the ODBC driver versions listed in *System Requirements and Supported Platforms* on Siebel SupportWeb for your chosen RDBMS for Siebel Servers, Siebel Developer Web Clients, and Siebel Tools clients. Make sure that ODBC connectivity uses TCP/IP as the transport layer protocol for your Siebel Servers, Siebel Developer Web Clients, and Siebel Tools clients.

How to Use This Guide If Your Database Is IBM DB2 UDB for z/OS

This guide describes installation of core Siebel products for each supported RDBMS, with the exception of IBM DB2 UDB for z/OS (formerly referred to as *IBM DB2 UDB for z/OS and OS/390*).

Customers for DB2 UDB for z/OS will require this guide (*Siebel Installation Guide* for the operating system you are using) and also require *Implementing Siebel Business Applications on DB2 UDB for z/OS*, available on the *Siebel Bookshelf*.

In this guide, Chapter 3, "Configuring the RDBMS," and Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database," do not apply to customers using DB2 UDB for z/OS. Instead, refer to *Implementing Siebel Business Applications on DB2 UDB for z/OS* for database-related content.

Implementing Siebel Business Applications on DB2 UDB for z/OS includes, but is not limited to, topics such as special security issues for this RDBMS, installing the Siebel Schema, performance guidelines for use of this RDBMS with Siebel Business Applications, and specific procedures for moving data from development to production.

Although *Implementing Siebel Business Applications on DB2 UDB for z/OS* contains some information (for example, security) that is not covered elsewhere on the *Siebel Bookshelf*, readers should still consult appropriate books in the *Siebel Deployment Documentation Suite*, such as the *Security Guide for Siebel Business Applications*. This suite of books contains important information that helps you to deploy the Siebel applications.

Managing Siebel Image Directories and Media Files

All products are installed from a Siebel image you create on the network using the Siebel Image Creator utility. Each Siebel release has its own version-specific network image, whether a base release or a patch release.

You will need to allocate space on the network for Siebel images that are to be used as the source location for Siebel installations. You should retain all network images until they no longer apply.

Also retain the Siebel media files—the compressed JAR files you obtain and use to create the Siebel image on the network.

For complete information about obtaining Siebel media and using Siebel Image Creator, see Chapter 4, "Creating the Siebel Installation Image on the Network."

Managing Temporary Disk Space Required by Installers

Siebel installer programs for server-based software require the use of temporary disk space during installation. Disk space required varies by platform. The location of temporary directories is specified using the TEMP and TMP environment variables. These variables should be set to the same location and must be set to a valid existing directory that contains adequate space.

Alternatively, when you run a Siebel installer program for server-based software, you can specify which temporary directory the installer should use in place of the directory specified by TEMP and TMP. For example, when installing Siebel Server, you can use a command like the following:

```
setup -is:tempdir temp_directory_location
```

For more information about command-line options for Siebel installers, see "Additional Flags for Installation Commands" on page 95.

The login ID running the installer must have write permissions to the temporary directory.

Table 3 on page 24 shows the minimum disk space required by Siebel installers for server-based software (by platform), along with the default temporary directory locations.

Table 3.   Temporary Disk Space Required by Siebel Installers

Operating System	Minimum Required Space	Default Location
AIX	200 MB	/tmp
Solaris	115 MB	/var/tmp
HP-UX	240 MB	/var/tmp

The Language in Which Siebel Installers and Wizards Run

When you launch Siebel installers, configuration wizards, or the Siebel Image Creator utility, the program launches in the appropriate language for the locale of your operating system, if this language and locale are supported by Siebel Systems.

Languages these programs can run in correspond to those for which Siebel Language Packs are supported, with the exceptions of Arabic, Hebrew, and Thai.

Because not all languages are supported in this context, make sure you have the locale of your operating system set to the desired choice of your language.

If the current locale is not supported, then, when you launch the program, you are prompted for the language in which to run the program.

Installers for Siebel client products include a prompt for the language in which to run the installer.

For a list of supported locales for your UNIX operating system, see "Specifying the Locale for Your UNIX Operating System" on page 27.

NOTE: If a supported locale that you intend to use does not exist on the supported OS platform, use another existing supported locale, so you can proceed with installation and initial configuration in a familiar language—for example, en_US.UTF-8 for U.S. English (on Solaris), DE_DE.UTF-8 for German (on AIX), and so on.

Installing Multiple Instances of Siebel Business Applications

This section describes issues in installing multiple instances of similar or dissimilar versions of Siebel Business Applications on the same machine.

Installing Multiple Instances of Similar Versions of Siebel Business Applications

By default, the Siebel installers automatically install Siebel software in unique directories that will not conflict with other Siebel software components, of the same or different versions, that you install on the same machine.

For related considerations, see also "Planning Topologies" on page 20. See also "About Installing Siebel Releases" on page 15.

To install another instance of the same version of a product on a single machine, specify a custom installation path. However, you cannot install multiple instances of the same version of Siebel Gateway Name Server on the same machine.

NOTE: In this context, *same version* refers to all releases sharing the same first two digits—such as 7.8.1, 7.8.2, and so on. Each product instance of the same version would be installed to the same default installation path, unless you specify a custom path. A release can be installed as a maintenance release if the prior release of the same series is already installed. For example, if available, 7.8.3 could be installed as a maintenance release if 7.8.2 is already installed.

Subcomponents of the Siebel Enterprise Server that are installed on the same machine *must* be installed into the same root directory. The subcomponents are Siebel Gateway Name Server, Siebel Server, Siebel Database Server, and EAI connectors. See also "File and Directory Naming Conventions" on page 30.

NOTE: You cannot install additional subcomponents into a root directory after applying a patch. You can install additional languages into a root directory after applying a patch, but you must reapply the patch afterwards.

Installing Multiple Instances of Dissimilar Versions of Siebel Business Applications

Multiple versions of Siebel components can be installed on the same machine. Sometimes you may need to do this as part of some upgrade scenarios. For more information about upgrading, see the *Upgrade Guide*.

You should use naming conventions for your installation directories that reflect the component and the version number being installed (the default installation directories already do this).

■ If you install multiple versions of the Siebel Gateway Name Server on the same machine, you must install them in different directories and assign unique port numbers.

   For installation instructions, see Chapter 6, "Installing the Siebel Gateway Name Server."

■ If you install multiple versions of the Siebel Server on the same machine, you must install them in different directories (the default installation directories already do this).

   For installation instructions, see Chapter 7, "Installing the Siebel Server."

■ If you install multiple versions of the Siebel Web Server Extension (SWSE) on the same machine, you must install them in different directories (the default installation directories already do this).

   CAUTION: *Before you install SWSE in such a scenario, you must take steps described in Technical Note 456 on Siebel SupportWeb.* For more information, see "SWSE Installation Requirements" on page 172, part of Chapter 9, "Installing the Siebel Web Server Extension."

Specifying the Locale for Siebel Applications

When a Siebel application component (Siebel Server, Siebel Tools client, or Siebel Developer Web Client) opens a connection to the Siebel Database, the locale is automatically determined on a per-session basis for the connection. This setting overrides settings that may be defined elsewhere.

Customers should not explicitly set the NLS_LANG (Oracle-specific), LANG, or SIEBEL_CODEPAGE environment variables for Siebel applications. Siebel environment files such as siebenv.csh (C shell) or siebenv.sh (Bourne or Korn shell) may set these variables, but these settings are not used for the database connection.

Settings in the siebenv.csh or siebenv.sh files affect any software that runs in the Siebel environment controlled by those files—except for the Siebel applications themselves.

For deployments using an Oracle database, the NLS_LANG variable determines default behaviors that can be overridden using other variables, such as NLS_SORT, that are *not* set automatically for Siebel applications using an Oracle database connection. Therefore, settings you make for NLS_SORT will affect any software that runs in the Siebel environment—*including* the Siebel applications.

CAUTION: For development environments, Siebel Business Applications support only binary sort order. Therefore, for Oracle databases, when you are setting the locale for your development environment, either you should not NLS_SORT at all, or you must set it to BINARY. In production environments, this restriction does not apply. (In this guide, *sort order* and *collation sequence* are used interchangeably, even though these terms may not always mean the same thing.)

You can explicitly set the locale for a Siebel Server (or Application Object Manager component) to use by setting the Locale Code parameter for the Siebel Server. For more information about creating or configuring this type of locale, see the *Applications Administration Guide* and the *Global Deployment Guide*.

For more information, see:

■ "Planning RDBMS Installation and Configuration" on page 22

■ "Specifying the Locale for Your UNIX Operating System" on page 27

■ "Managing Environment Variables" on page 141

■ The topics that apply to your RDBMS platform in Chapter 3, "Configuring the RDBMS"

Specifying the Locale for Your UNIX Operating System

To successfully run Siebel Business Applications on UNIX, you have to configure the appropriate locales on your operating system for the language you will run the applications in. In some cases, you may need to install additional content on your system in order to support the locale.

For LANG or LC_ALL settings on different UNIX platforms for supported languages or locales, see Table 4 on page 28.

NOTE: The setting of the LANG environment variable does not affect database connections for Application Object Manager components for Siebel applications. However, it does affect database connections used by other Siebel components. For more information, see "Specifying the Locale for Siebel Applications" on page 26. See also "Managing Environment Variables" on page 141.

Table 4.   Lang or LC_ALL Settings for Supported Languages or Locales

Language or Locale	Siebel Language Code	UNIX LANG or LC_ALL Setting		
		Solaris	AIX	HP-UX
Arabic (Saudi Arabia)	ARA	ar_SA.UTF-8	AR_SA.UTF-8	ar_SA.utf8
Chinese (Simplified)	CHS	zh_CN.UTF-8	ZH_CN.UTF-8	zh_CN.utf8
Chinese (Traditional)	CHT	zh_TW.UTF-8	ZH_TW.UTF-8	zh_TW.utf8
Czech	CSY	cs_CZ.UTF-8	CS_CZ.UTF-8	cs_CZ.utf8
Danish	DAN	da_DK.UTF-8	DA_DK.UTF-8	da_DK.utf8
Dutch	NLD	nl_NL.UTF-8	NL_NL.UTF-8	nl_NL.utf8
English (United States)	ENU	en_US.UTF-8	EN_US.UTF-8	en_US.utf8
Finnish	FIN	fi_FI.UTF-8	FI_FI.UTF-8	fi_FI.utf8
French (France)	FRA	fr_FR.UTF-8	FR_FR.UTF-8	fr_FR.utf8
German (Germany)	DEU	de_DE.UTF-8	DE_DE.UTF-8	de_DE.utf8
Hebrew	HEB	iw_IL.UTF-8	IW_IL.UTF-8	iw_IL.utf8
Italian	ITA	it_IT.UTF-8	IT_IT.UTF-8	it_IT.utf8
Japanese	JPN	ja_JP.UTF-8	JA_JP.UTF-8	ja_JP.utf8
Korean	KOR	ko_KR.UTF-8	KO_KR.UTF-8	ko_KR.utf8
Portuguese (Brazil)	PTB	pt_BR.UTF-8	PT_BR.UTF-8	pt_BR.utf8
Portuguese (Portugal)	PTG	pt_PT.UTF-8	PT_PT.UTF-8	pt_PT.utf8
Spanish (Modern)	ESN	es_ES.UTF-8	ES_ES.UTF-8	es_ES.utf8
Swedish	SVE	sv_SE.UTF-8	SV_SE.UTF-8	sv_SE.utf8
Thai	THA	th_TH.UTF-8	TH_TH.UTF-8	th_TH.utf8

Setting Permissions and Ownership

■ Before you install each server component discussed in this guide, set umask to 027 on the installation directory of that machine. Changing this setting eliminates other permissions, including group write permissions.

This action also sets the default permissions, so that all files and directories created afterwards have `rwxr-x---` permissions.

Siebel Service Owner should have all permissions. However, the group should have read and execute (for directory access) permissions only.

■ Before installing any Siebel server software, a user with root permissions must create the directory /var/adm/siebel. This directory is different from the directory into which the Siebel products are installed and must be created for every Siebel product that uses the Siebel installer. The user running the Siebel installer must have write permissions to this directory or the installation fails.

If the /var/adm/siebel directory structure does not exist, the installer will try to create it. Because it is not recommended to install Siebel products as root, a user with root permissions must first create this directory and verify that the correct permissions are set for the installer to write to this directory.

Installing from a Remote Server Machine

If you are installing in GUI mode from a remote server machine, you must set the DISPLAY variable to display the Java installer user interface on your local machine. For example, depending on your shell:

    export DISPLAY=*myworkstation*:0.0

or

    setenv DISPLAY *myworkstation*:0.0

where:

■ *myworkstation* = The machine name or IP address of your local workstation

You may be able to test that your display works correctly on your local workstation by entering:

    xclock

You can also verify the IP address by entering:

    echo $DISPLAY

If the clock does not appear on your local workstation, then issue the following command on your local machine:

    xhost +

If you observe poor performance or unexpected behavior displaying GUI-based applications on your local workstation, telnet to the UNIX server and use console mode to perform installation. For console mode installation, see "Installing Siebel Applications in Console Mode" on page 92.

If you are using X-connectivity software to access the UNIX machine from a Windows machine, you might experience unexpected exiting or hanging by the installer. If this is the case, try using a later version of the X-connectivity software. For Exceed, for example, use version 8.0 or greater.

NOTE: For additional information, refer to vendor or other documentation for your UNIX platform, or contact your system administrator for assistance.

Siebel Server and Enterprise Server Naming Conventions

This section describes conventions you should follow when planning names for the Siebel Enterprise Server and Siebel Server instances.

Siebel Gateway Name Server names are defined automatically based on the server machine name.

Siebel Server Naming Conventions

When planning the names of Siebel Server instances within a Siebel Enterprise, the following restrictions apply:

■ Names must contain only alphabetic characters, numerals, underscores, or a combination thereof. (For example, do not use dashes or hyphens in naming Siebel Server instances.)

■ Names must lead with an alphabetic character.

■ Names must be unique within the Siebel Enterprise.

■ Names must be no longer than 12 characters.

■ Names cannot be *server* or *enterprise*.

Siebel Enterprise Server Naming Conventions

The following restriction applies to naming Siebel Enterprise Servers:

■ Names must be no longer than 12 characters.

■ Names cannot be *server* or *enterprise*.

File and Directory Naming Conventions

Use lowercase for all filenames, directory names, path names, parameters, flags, and command-line commands, unless you are instructed otherwise.

Directory names or filenames may not contain special characters, such as apostrophes, accents, number (pound, or hash) signs, ampersands, or spaces. For Windows server installs, spaces are not allowed; spaces are allowed on Windows client installs. Underscores are acceptable.

How This Guide Refers to Your Installation Directories

This guide uses the following variable-naming conventions to refer to the installation directories either created by the installers or to which users navigate to access files and executable programs.

$*SIEBEL_ROOT*. Generally, this refers to the main directory in which software for each Siebel Server Enterprise entity has been installed. The installers for the UNIX Enterprise Server components install into the top-level directory /siebel by default, though the actual directory where you install is likely to be different, such as /export/home/siebel. Generally, this directory is what $*SIEBEL_ROOT* represents in this book.

However, $*SIEBEL_ROOT* may also represent the value of the SIEBEL_ROOT environment variable, which usually corresponds to a component-specific installation directory, such as /export/home/siebel/siebsrvr for Siebel Server.

$*SIEBEL_HOME.* The installation or root directory for Siebel Business Applications software in general, or the Siebel Gateway Name Server or the Siebel Server, depending on the context. Many scripts contain variables with this name; its meaning is most often derived from the context.

$*SIEBSRVR_ROOT*. The installation or root directory for Siebel Server.

$*SIEBEL_SERVER_ROOT*. This term is sometimes used within executable programs, such as the si ebel _server script, as a synonym for $*SIEBEL_HOME*.

$*SIEBEL_GATEWAY_ROOT*. The installation or root directory for Siebel Gateway Name Server.

$*SWSE_ROOT*. The directory into which you install the Siebel Web Server Extension (SWSE).

$*SIEBEL_CLIENT_ROOT*. The directory into which you install the Siebel Mobile Web Client or Siebel Developer Web Client.

$*SIEBEL_TOOLS_ROOT*. The directory into which you install the Siebel Tools Client.

Creating the Siebel File System

The *Siebel File System* is a shared directory that is network-accessible to the Siebel Server. The file system may be installed on a server machine where you have installed a Siebel Server, or on another network server that can share the directory, so that it is available to the Siebel Server.

NOTE: If the operating systems of the two machines for the Siebel Server and the File System are different—for example, one Windows and one UNIX—you may need to deploy a third-party cross-platform networking tool such as Samba to allow both machines to share the directory. Refer to your third-party documentation for details.

Because it is possible that two Siebel Server instances will execute simultaneously on the same node, you must create a unique mount point for the sharable file system.

When you install each Siebel Server, you are prompted for the local mount point directory of the Siebel File System. Be sure to explicitly specify the unique mount point for each Siebel Server instance. Do not use the default values or those from a previous Siebel Server installation.

NOTE: Consult your third-party documentation for networked file system requirements.

When deploying a Siebel component on a specific Siebel Server instance, it may be necessary in some circumstances to override the component's attribute that specifies the directory for the Siebel File Server. Such overrides apply only to components that require access to the Siebel File System.

NOTE: You must create a separate file system for each Siebel Enterprise Server. For example, if you have development and test databases, you must have two separate Siebel Enterprise Servers, and therefore two Siebel File Systems.

Each Siebel Server accesses its Enterprise's Siebel File System by means of a dedicated server component, called File System Manager (FSM). Individual Web clients need no direct knowledge of the location of the Siebel File System, because they connect directly with the appropriate Siebel Server to request file uploads or downloads. File System Manager then processes these requests through interaction with the Siebel File System directory. For more information about File System Manager, see the *Siebel System Administration Guide*.

NOTE: The Siebel File System can be defined at the Enterprise level, Siebel Server level, or server component level. In a mixed Siebel Server environment, you must individually modify a parameter at the Siebel Server or the component level if the File System location is different from the default (Enterprise) location, using the Server Manager. If you do not specify the File System location at the component level, the value is inherited from the Siebel Server (if it has been set there) or from the Enterprise (the default).

Because File System Manager is the sole access mechanism to the Siebel File System, only the user with administrative privileges for the Siebel Server should have access privileges to the File System directories. This precaution protects the File System from direct physical access by all other users.

For more information about deployment options for the Siebel File System, see the *Deployment Planning Guide*.

Naming the Siebel File System Directory

The Siebel File System directory name must be alphanumeric and cannot contain special characters or spaces. Underscores are permitted. Also, each filename must begin with an alphabetic character. For example, name the directory something like:

/server/siebel or /server/siebel/filesystem

The remainder of this document refers to this directory as:

/*SiebelFS*/*siebel7x*

where:

■ *SiebelFS* = The host name of the machine (assuming that a dedicated machine is used for the Siebel File System).

■ *siebel7x* = The name of the shared directory.

You need to specify the shared directory when installing the Siebel Server. The shared directory must be available to all Siebel Servers in the Enterprise. You may need to use a file-sharing tool to access this directory.

As part of the Siebel Server installation, File System Manager automatically generates a set of subdirectories under the Siebel File System root directory, as described in Table 5 on page 33.

NOTE: When creating a Siebel File System shared directory, only the associated Siebel Servers should be allowed to create subdirectories in that location. No subdirectories should be manually created in that location.

Table 5. Siebel File System Subdirectories

Subdirectory	Purpose
`att`	Main subdirectory for attachments
`atttmp`	Temporary directory for attachments
`cms`	Siebel Smart Answer files
`red`	Rule edit cache for Siebel Configurator
`sme`	Cache files for Siebel Marketing
`Marketing`	Main subdirectory for Siebel Marketing
`ssp`	Session preferences
`eim`	Siebel transaction files for Siebel EIM
`userpref`	Siebel user preferences

For more information about these subdirectories, see the *Siebel System Administration Guide.*

Setting Up the Siebel File System
Use the following procedures to set up the Siebel File System.

To set up the Siebel File System

1 Create the directory on the server and record the path in the copy you made of the worksheet in Appendix A, "Deployment Planning Worksheet."

2 Using the appropriate administrative tools for your UNIX platform, set permissions for the Siebel administrator to access the directory and subdirectories to 700.

   NOTE: Only the Siebel administrator for the Siebel Server should have access privileges to the Siebel File System.

3 Grant access to each Siebel Server and client for the appropriate group.

Remember to install the third-party software required to view standard attachment types, such as MS Word, Excel, or Lotus Notes on the client machines that will be running the Siebel Mobile Web Client.

If an appropriate GUI-based administrative tool does not exist on your platform, you can use the chmod and chgrp utilities to set these parameters. Consult your UNIX platform documentation for more information.

Clustering Prerequisites for the File System

If you will be operating this File System as part of a cluster, you must install it on a clustered disk drive in the same cluster resource group in which the Siebel File System service resource will run. For information about clustering your servers, see the *Deployment Planning Guide*.

Creating the Siebel Service Owner Account

The Siebel Enterprise Server requires that you create a standard UNIX system user account. This account must be defined on each Siebel Server in your Enterprise under which Siebel processes and components operate.

Use the following guidelines to create the Siebel service owner account:

■ The Siebel service owner account must be defined or available on each applicable server machine: on the Siebel Gateway Name Server, on each Siebel Server in the Enterprise, and on any machine on which the Siebel File System exists.

■ Create the account at the network level, using an appropriate administration tool for your UNIX platform, so that the same account can be used for all UNIX servers within the Siebel Enterprise Server. Make sure that the numeric values for uid and gid match across the various machines.

■ Determine what the account name and password will be, and record this information in your copy of the worksheet in Appendix A, "Deployment Planning Worksheet." (For security reasons, you may prefer not to record the password.) See also the *Security Guide for Siebel Business Applications*.

■ The account password should not require a change on next logon and must be set not to expire.

■ The account name or password cannot contain any spaces.

3 Configuring the RDBMS

This chapter provides guidelines for configuring the third-party RDBMS and creating the Siebel Database. It includes the following topics:

- *"Overview of Database Configuration" on page 35*
- *"Configuring IBM DB2 UDB for Siebel Applications" on page 37*
- *"Configuring Oracle for Siebel Applications" on page 52*

NOTE: If your database is IBM DB2 UDB for z/OS, refer to *Implementing Siebel Business Applications on DB2 UDB for z/OS* instead of this chapter. See also the relevant information under *"Planning RDBMS Installation and Configuration" on page 22*.

Overview of Database Configuration

In general, each customer must follow these general steps for each supported RDBMS platform described in this chapter. For more information, see your third-party vendor documentation, guidelines presented in this chapter for each RDBMS, and other applicable parts of this book.

CAUTION: *In an upgrade environment, you do not perform any tasks mentioned in this chapter.* In particular, you do not create the database instance on the RDBMS. However, after the upgrade is complete, you may need to modify database parameters for your RDBMS platform to match settings described in this chapter. For more information, see *"About Installing in Upgrade Environments" on page 16*.

For non-upgrade deployments, after creating the Siebel Database and installing the Siebel Business Applications software, you use scripts and utilities provided with the Siebel Database Server installation to load the Siebel schema and seed data into the Siebel Database. For details, see Chapter 8, *"Installing the Siebel Database Server and Configuring the Siebel Database."*

See also "Planning RDBMS Installation and Configuration" on page 22.

NOTE: In general, it may be easier to configure and administer a Siebel Database that does not share a database instance with other applications, and this approach is considered a best practice. However, some customers may decide to include multiple applications in a single database instance. The implications of this choice may differ by RDBMS type: for example, the term *database instance* has a different meaning for Oracle than it does for DB2 UDB. The shared database instance must be configured according to requirements described here.

CAUTION: Changing the Siebel schema requires changing referential integrity rules for business components and Siebel EIM interface tables, using Siebel Tools. Failure to make the appropriate changes in the Siebel schema can lead to data corruption. Changing the Siebel schema also requires changing assignment objects, dock objects (for data access or visibility), import objects, and integration objects, also using Siebel Tools. Failure to make the appropriate changes can lead to functional deficiencies in the application and, in severe cases, may prevent you from starting the application. Customers are advised to seek the help of Siebel Expert Services when planning to modify the Siebel schema.

Process of Configuring the Database

The process of configuring the database is outlined below:

1 Install the RDBMS software:

- Install RDBMS server software on the appropriate server machines.

- Install RDBMS client software on machines where you will install Siebel Server, Siebel Tools, or other products that will connect to the Siebel Database.

2 Create the database instance.

3 Configure parameters for the database instance.

4 (DB2 UDB) Create the database, and configure parameters for the database.

5 Configure table spaces, logspace, and other elements for the Siebel Database.

6 After you install the Siebel Gateway Name Server and Siebel Server (described in subsequent chapters), install the Siebel Database Server on a Siebel Server machine. See Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database." (The remaining steps are described in the same chapter.)

7 On the machine where you installed the Siebel Database Server, run the Database Server Configuration Wizard to install the Siebel schema in the Siebel Database. See "Configuring the Siebel Database on the RDBMS" on page 158.

This step creates Siebel objects (tables and indexes) and imports seed data in the Siebel Database.

8 Run the Database Server Configuration Wizard to import repository data into the Siebel Database. See "Configuring the Siebel Database on the RDBMS" on page 158.

9 Perform other tasks described in "Postinstallation Tasks for the Siebel Database Server and Siebel Database" on page 169.

About Using Sample Scripts for Creating Siebel Database Objects

Sample scripts provided with the Siebel Database Server installation can optionally be used to create the Siebel Database and install the Siebel schema. *These scripts are for testing purposes in small, nonproduction environments only.* If you intend to use such a script, first perform the tasks above, through Step 6 on page 36, but omit Step 4 on page 36 and Step 5 on page 36.

For more information about the scripts, see:

■ "Guidelines for Creating DB2 UDB Database Objects" on page 51

■ "Guidelines for Creating Oracle Database Objects" on page 60

Configuring IBM DB2 UDB for Siebel Applications

This section contains guidelines for obtaining optimal performance from the DB2 Universal Database for use with Siebel Business Applications. These guidelines will be useful to a broad segment of customers. However, you should choose values for the parameters described in this guide that reflect conditions in your particular environment. For additional information, refer to IBM DB2 UDB technical documentation.

NOTE: In this guide, the terms *DB2 UDB* or *DB2 UDB for UNIX and Windows* are often used to refer to the database platform IBM DB2 Universal Database for Linux, UNIX, and Windows. This platform may be referred to using other terms than these in some Siebel software contexts.

For additional relevant information, see "Overview of Database Configuration" on page 35.

When you use DB2 UDB, the DB2 UDB Application Development Client must be installed on the RDBMS machine where the Siebel Database is located. Verify that the Application Development Client is installed before proceeding. For more information, see the *Upgrade Guide*.

After you have completed configuring your DB2 UDB database, you can perform all Siebel installation tasks, including those described in Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database."

Guidelines for Configuring IBM DB2 UDB for Siebel Applications

Various kinds of guidelines are presented in this section for configuring an IBM DB2 UDB database:

■ "Guidelines for Setting DB2 UDB Database Manager Configuration Parameters" on page 38

■ "Guidelines for Selecting a Language for DB2 UDB" on page 40

■ "Guidelines for Creating the DB2 UDB Database" on page 41

■ "Guidelines for Setting DB2 UDB Configuration Parameters" on page 42

■ "Guidelines for Setting Up DB2 UDB Bufferpools" on page 45

■ "Guidelines for Creating DB2 UDB Table Spaces" on page 46

Guidelines for Setting DB2 UDB Database Manager Configuration Parameters

You can set the database configuration parameters using the update database manager configuration command of the DB2 Command Line Processor or using the DB2 Control Center.

For more information on modifying these configuration parameters, see the IBM DB2 UDB technical documentation.

Table 6 on page 38 describes DB2 UDB database manager configuration parameters that differ from the default settings. Set these parameters for each DB2 UDB instance. Use the configuration information in Table 6 for the listed parameters. For parameters not listed in this table, accept the default settings.

Table 6.　　DB2 UDB Database Manager Configuration Parameters

Parameter	Explanation	Setting/Comment
SHEAPTHRES	Sort heap threshold (4 KB)	200000 Deployments with 3,000 or more concurrent users and using over 5 GB of RAM can increase this to 300000.
DIR_CACHE	Directory cache support	YES
ASLHEAPSZ	Application support layer heap size	15
RQRIOBLK	Maximum requester I/O block size (bytes)	65535
MON_HEAP_SZ	Database monitor heap size (4 KB)	128 (minimum)
QUERY_HEAP_SZ	Query heap size (4 KB)	16384
KEEPFENCED	Keep Fenced process	YES
MAXAGENTS	Maximum number existing agents	20000 (minimum)
NUM_INITAGENTS	Initial number agents in pool	10

Table 6.   DB2 UDB Database Manager Configuration Parameters

Parameter	Explanation	Setting/Comment
NUM_POOLAGENTS	Number of agents in the agent pool kept active at all times	80
MAX_COORDAGENTS	Maximum number coordinating agents	MAXAGENTS
INDEXREC	Index re-creation time	RESTART
INTRA_PARALLEL	Enable intra-partition parallelism	NO

DB2set Parameters

Use the db2set command to set the parameters (for example, db2set DB2_HASH_JOIN = NO) referenced in .

Table 7.   db2set Parameters

Parameter	Explanation	Setting
DB2MEMDISCLAIM	AIX only. When set to YES, DB2 agents explicitly request that the database server disassociate the reserved paging space from freed memory. Affects how DB2 frees shared memory.	YES
DB2MEMMAXFREE	AIX only. Maximum amount of unused memory in bytes retained by DB2 processes. It affects how DB2 frees shared memory and causes DB2 to release memory as soon as the size of the DB2 agent goes above the listed value.	1000000
DB2_HASH_JOIN	Turns off hash joins in the optimizer.	NO
DB2_MMAP_WRITE	AIX only. Recommended setting only; you should evaluate this setting for your particular configuration and environment.	OFF
DB2_MMAP_READ	AIX only. Recommended setting only; you should evaluate this setting for your particular configuration and environment.	OFF
DB2_CORRELATED_PREDICATES	When set to YES, the optimizer is able to determine whether predicates in a query are related, which permits DB2 to calculate the filter factor more accurately.	YES
DB2_PIPELINED_PLANS	Tells the DB2 optimizer to favor pipeline execution plans—plans that are left deep and have no temporary result sets.	ON
DB2_INTERESTING_KEYS	Limits the number of execution plans generated by the DB2 optimizer.	ON

Table 7.   db2set Parameters

Parameter	Explanation	Setting
DB2_PARALLEL_IO	Useful when using RAID devices. For more information, see your DB2 vendor documentation.	*
DB2_STRIPED_CONTAINERS	Useful when using RAID devices. For more information, see your DB2 vendor documentation.	ON
EXTSHM	AIX only. Use this parameter only when you have the Siebel Database and the Siebel Server on the same AIX machine. EXTSHM must be set when the DB2 UDB database is created and must be included in the script that starts it. The parameter also must appear in the sqllib/db2profile file for the DB2 UDB server. Additionally, you should include this parameter in the script that starts the DB2 client. After changing any of these settings, you must perform a db2stop, then db2start, to implement the changes in your DB2 UDB database.	ON
DB2ENVLIST	AIX only. When starting a DB2 UDB server and running EXTSHM, EXTSHM must be part of the DB2 environment. This parameter must be set when the database is created.	EXTSHM
DB2_NO_PKG_LOCK	To bind the Siebel package with siebbind, this package must be off.	OFF

Guidelines for Selecting a Language for DB2 UDB

As part of database creation, you must set the language characteristics of your database, even if you deploy in only one language.

To do this, you must know which of the Siebel-supported languages your database runs, the codeset your database uses, the territory (also called the locale) for your language (such as Canadian French), and the sort order (also known as collation sequence) your users prefer.

For a DB2 UDB production environment database, you can use any sort order. For a development environment database, you must use binary (identity) sort order.

Setting the language characteristics of the database is part of the sample script in the $*SIEBEL_ROOT*/dbsrvr/DB2UDB directory.

For supported Siebel language code, territory, and codeset for your database, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

See also "Planning RDBMS Installation and Configuration" on page 22 and "Specifying the Locale for Siebel Applications" on page 26.

See also "Verifying System Preferences and Other Settings for Database Code Page" on page 169.

Codeset

DB2 UDB distinguishes between a code page (also known as a character set) and a codeset. A *codeset* is defined as a textual string that describes the character encoding standard used for the database, whereas a *code page* is a numeric representation of the same standard.

Territory

The *territory*, or region, is a combination of the language and the locale; for example, French would be a language example, while Canada or France would be locales in which French is used with regional differences.

Sort Order

The sort order is specified during the initial installation of a database and defines the way in which the database sorts character data. Sort order support depends on both the code page of the database and whether it will be used in a development or a production environment.

For more information on supported sort orders, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

■ **Development environment databases.** Repository object names in your development environment database must sort in the same order that they would under the UTF-16 binary sort order, because Siebel Tools uses this sort order internally.

   NOTE: Binary sort order is the simplest and fastest sort order to perform in the database. Binary sorting is case-sensitive and based on the numeric values (for example, 0 through 255 for an 8-bit character set) of characters in the installed character set.

   Customers are responsible for making sure that their data is backed up and restored correctly.

■ **Production environment databases.** For information on production environment database restrictions, see *System Requirements and Supported Platforms* on Siebel SupportWeb. Also refer to your IBM DB2 UDB documentation.

Guidelines for Creating the DB2 UDB Database

If you are installing a database that is to be enabled for Unicode, you must enter UTF–8 as the codeset (including the hyphen). UTF-8 is the parameter used for Unicode implementations on DB2 UDB, although the actual processing will use UCS-2. When you specify UTF-8 as the encoding for the VARCHAR type, the encoding for the VARGRAPHIC type is automatically set to UCS-2, even though UCS-2 is not specified as the parameter.

Verify that your data is exported and imported correctly.

To create the DB2 UDB database

1 Locate the primary (base) language your database will use, the territory for your language, and the applicable codeset.

For the values that apply to your language, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

2 Using the DB2 UDB Command Line Processor, enter the following command:

db2 create database *dbname* using *codeset territory* collate using identity

where:

- ■ *dbname* = The alias for your database
- ■ *codeset* = The textual representation of your code page
- ■ *territory* = The territory for the language your database runs in under that codeset

Guidelines for Setting DB2 UDB Configuration Parameters

The database configuration parameters can be set using the update database configuration command of the DB2 Command Line Processor or using the DB2 Control Center.

For more information on modifying these configuration parameters, see the IBM DB2 UDB technical documentation.

Table 8 on page 43 describes DB2 database configuration parameters that differ from the default settings. However, these descriptions are guidelines only.

Set these parameters for *each* database within an instance on which you run your Siebel application. For other parameters, accept the default settings.

Table 8.   DB2 UDB Configuration Parameters

Parameter	Explanation	Setting
DFT_DEGREE	Degree of parallelism (1=turn query parallelism off).	1
DFT_QUERYOPT	Default query optimization class. This parameter only takes effect on the database server and affects the Siebel Server components, such as Siebel EIM or Siebel Remote. Queries run through the UI are not affected by this setting. They take the value of the Siebel system preference DB2: Default Opt Level, or you can override them at the business component level using Siebel Tools.	3
DBHEAP	Database heap (4 KB).	7429 (32-bit) 10000 (64-bit)
CATALOGCACHE_SZ	Catalog cache size (4 KB).	5558 (32-bit) 8000 (64-bit)
LOGBUFSZ	Log buffer size (4 KB).	On AIX, 128 (32-bit) 512 (64-bit)
UTIL_HEAP_SZ	Utilities heap size (4 KB).	5000 (32-bit) 10000 (64-bit)
LOCKLIST	Maximum storage for lock list (4 KB).	25000 (The setting should never be smaller than this, but may be increased.)
APP_CTL_HEAP_SZ	Maximum applications control heap size (4 KB). Controls the number of users that can be included within one connection to the database.	900 For customers using the Siebel connection pooling feature, for best scalability, increment the parameter by 1200 for each 10 users per connection.

Table 8.   DB2 UDB Configuration Parameters

Parameter	Explanation	Setting
SORTHEAP	Sort list heap (4 KB). Lower values should be used for development environments; higher values for production. However, increasing this value can lead to insufficient memory on the database server. Also, this parameter may need to be set below the recommended range if you have a high number of Siebel users. Therefore, you need to always monitor database server memory and performance to find the best setting for your environment.	1000–5000
STMTHEAP	Minimum setting. If needed, this parameter should be incremented in 1048 blocks.	40960
STAT_HEAP_SZ	Statistics heap size (4 KB).	14000 (32-bit) 20000 (64-bit)
MAXLOCKS	Percentage of lock lists per application.	20 (32-bit) 30 (64-bit)
LOCKTIMEOUT	Lock time out (seconds).	300
CHNGPGS_THRESH	Changed pages threshold.	30
NUM_IOCLEANERS	Number of asynchronous page cleaners.	Number of CPUs.
INDEXSORT	Index sort flag.	YES
SEQDETECT	Sequential detect flag.	YES
DFT_PREFETCH_SZ	Default prefetch size (4 KB).	32
LOGRETAIN	Sequential or circular log files.	RECOVERY Set this parameter to RECOVERY in a *production environment*. Otherwise, you will lose data should your database crash. When LOGRETAIN is set to RECOVERY, you must also activate USEREXIT or implement another method to manage the archived logs, so that LOGPATH does not fill up.
MAXAPPLS	Maximum number of active applications.	Twice the number of users.

Table 8.   DB2 UDB Configuration Parameters

Parameter	Explanation	Setting
AVG_APPLS	Average number of active applications.	Depends on the environment.
MAXFILOP	Maximum DB files open per application.	500
LOGFILSIZ	Log file size (4 KB).	40000
LOGPRIMARY	Number of primary log files.	25–50 The value of LOGPRIMARY and LOGSECOND together may not exceed 128.
LOGSECOND	Number of secondary log files.	Up to 103 The value of LOGPRIMARY and LOGSECOND together may not exceed 128.
ESTORE_SEG_SZ	Deployments with servers with more than 4 GB of RAM can take advantage of this extended storage parameter. Use of this parameter also improves application sorting. Attach 4-KB and 16-KB buffer pools. **NOTE:** The setting should be subject to your performance testing.	Initially 0 but can be up to 65536.
NUM_ESTORE_SEGS	See explanation of ESTORE_SEG_SZ.	Initially 0.
SOFTMAX	Percent log file reclaimed before soft checkpoint.	80
APPLHEAPSZ	Default application heap (4 KB).	2500
PCKCACHESZ	Package cache size (4 KB).	40000
NUM_IOSERVERS	Number of disks on which the database resides.	Number of disks.

Guidelines for Setting Up DB2 UDB Bufferpools

A *bufferpool* is an area of main system memory that is used for holding pages of data that have been fetched from the table space. In DB2 UDB, each table space is associated with a bufferpool. Adding more space to a bufferpool enhances the performance of the database.

You must have at least three bufferpools for the Siebel table spaces. You can use the default bufferpool (called IBMDEFAULTBP) to buffer data pages from all the Siebel 4-KB table spaces.

You must also create additional bufferpools with 16-KB and 32-KB page sizes for sorting and other SQL processing. A sample configuration is shown in Table 9 on page 46.

Table 9.   Sample Bufferpool Configuration

Bufferpool	Suggested Bufferpool Size	Page Size
IBMDEFAULTBP	50% of available memory	4 KB
BUF32K	32 MB	32 KB
BUF16K	25% of available memory	16 KB

Different operating systems support different maximum amounts of DB2 addressable memory. Depending on the memory configuration of a given server, the suggested pool sizes for IBMDEFAULTBP and BUF16K bufferpools may exceed these maximums, requiring you to allocate a smaller percentage. To determine optimal bufferpool sizes, use DB2 monitoring features.

Guidelines for Creating DB2 UDB Table Spaces

The Siebel Database Server installation process described in Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database," specifies the table spaces in which to store your Siebel tables and indexes.

A Siebel Database on DB2 UDB requires at least four table spaces using database-managed space (DMS). Each table space can have one or more table space containers to store the data. You should create a *minimum* of four DB2 UDB table spaces to hold your tables and indexes: a 4-KB, a 16-KB, and a 32-KB table space, for your various sized tables, and an additional table space to hold your indexes. The table spaces must be created as database-managed space.

Use a small, nonproduction environment for testing purposes.

Observe the following guidelines when creating table spaces:

■   Create at least four DB2 UDB table spaces for tables of various sizes, as shown in Table 10 on page 46. Using the default table space names is recommended.

Table 10.   DB2 UDB Table Space Values for Both Non-Unicode and Unicode-Enabled Databases

DB2 UDB Table Space Name	Bufferpool Name	Recommended Value	Description
Non-Unicode-Enabled Database			
SIEBEL_4K	IBMDEFAULTBP	2 GB	Table space name for tables with row sizes of at most 4005 bytes.
SIEBEL_16K	BUF16K	300 MB	Table space name for tables with row sizes from 4006 bytes through 16,293 bytes.

Table 10.   DB2 UDB Table Space Values for Both Non-Unicode and Unicode-Enabled Databases

DB2 UDB Table Space Name	Bufferpool Name	Recommended Value	Description
SIEBEL_32K	BUF32K	100 MB	Table space name for tables with row sizes greater than 16,293 bytes.
Unicode-Enabled Database			
SIEBEL_4K	IBMDEFAULTBP	3 GB	Table space name for tables with row sizes of at most 4005 bytes.
SIEBEL_16K	BUF16K	700 MB	Table space name for tables with row sizes from 4006 bytes through 16,293 bytes.
SIEBEL_32K	BUF32K	100 MB	Table space name for tables with row sizes greater than 16,293 bytes.

■ Create additional table spaces as required for individual tables, such as S_DOCK_TXN_LOG. If you expect to have large, heavily used tables, put these in their own table space.

■ Create at least a 4-KB, 16-KB, and 32-KB temporary table space to use for sorting and other SQL processing as described in the following sections. If you do not create them, your database will experience serious performance and stability problems. Use system-managed space (SMS) for all temporary table spaces. These temporary table spaces should also be expandable to 2 GB for storage purposes.

■ If you intend to use the DB2 Load utility to populate EIM tables, this method makes the table space in which the EIM table resides unavailable for the duration of the load. Placing the EIM tables in one or more separate table spaces allows concurrent activity on the database while the load utility is running.

Be sure to record the table space names in Appendix A, "Deployment Planning Worksheet."

■ To override default storage parameters, such as the table space definitions, see "Guidelines for Overriding DB2 UDB Default Table Spaces for Database Objects" on page 47.

Guidelines for Overriding DB2 UDB Default Table Spaces for Database Objects

Siebel Systems provides the option of overriding the default storage parameters for the table spaces in which specific tables or indexes are created. You created these table spaces using the instructions under "Guidelines for Creating DB2 UDB Table Spaces" on page 46. To override these defaults, edit the ddl.ctl file located in the dbsrvr/DB2UDB directory.

NOTE: The ddl.ctl file should be modified only by a qualified DBA.

For each Siebel table, you can specify a table space by using the Table Space parameter. In the following example, the table space for the table S_APP_VIEW is set to DATA1.

As provided by Siebel Systems, the .ctl file does not set storage parameters for the objects it creates, so they default to the parameters of the table spaces in which they are created. However, the Table Space parameter only works under the following conditions:

■ The table does not yet exist (for example, when you are performing a new database installation).

■ The table needs to be rebuilt. In other words, there are schema changes made to the table such that an ALTER TABLE command is not sufficient to implement the schema changes, requiring that the Siebel application drop and re-create the table.

As shown in the following example, you can use the Table Space parameter to set storage parameters for specific tables.

```
[Object 219]
Type = Table
Name = S_APP_VIEW
Column 1 = ROW_ID VARCHAR(15) NOTNULL
Column 2 = CREATED TIMESTAMP NOTNULL DEFAULT %NOW%
Column 3 = CREATED_BY VARCHAR(15) NOTNULL
Column 4 = LAST_UPD TIMESTAMP NOTNULL DEFAULT %NOW%
Column 5 = LAST_UPD_BY VARCHAR(15) NOTNULL
Column 6 = DCKING_NUM NUMERIC(22,7) DEFAULT O
Column 7 = MODIFICATION_NUM NUMERIC(10,O) NOTNULL DEFAULT O
Column 8 = CONFLICT_ID VARCHAR(15) NOTNULL DEFAULT 'O'
Column 9 = NAME VARCHAR(50) NOTNULL
Column 10 = DESC_TEXT VARCHAR(255)
Column 11 = LOCAL_ACCESS_FLG CHAR(1)
Table Space = data1
```

The following example illustrates how to override the defaults for specific tables and indexes.

```
[Object 7135]
Type = Table
Name = S_EVT_ACT
Group = Activity-1
Append Mode = Yes
Column 1 = ROW_ID WVARCHAR(15) NOTNULL
Column 2 = CREATED TIMESTAMP NOTNULL DEFAULT %NOW%
Column 3 = CREATED_BY WVARCHAR(15) NOTNULL
Column 4 = LAST_UPD TIMESTAMP NOTNULL DEFAULT %NOW%
Column 5 = LAST_UPD_BY WVARCHAR(15) NOTNULL
Column 6 = DCKING_NUM NUMERIC(22,7) DEFAULT O
Column 7 = MODIFICATION_NUM NUMERIC(10,O) NOTNULL DEFAULT O
Column 8 = CONFLICT_ID WVARCHAR(15) NOTNULL DEFAULT 'O'
Column 9 = ACTIVITY_UID WVARCHAR(30) NOTNULL DEFAULT 'x'
...
Column 166 = TODO_CD WVARCHAR(30)
Column 167 = USER_MSG_ID WVARCHAR(15)
Column 168 = WC_START_VIEW WVARCHAR(250)
Column 169 = WC_TYPE_CD WVARCHAR(30)

[Object 7136]
Type = Index
Name = S_EVT_ACT_F1
```

```
Table = S_EVT_ACT
Column 1 = CON_PRDINT_ID ASC
Index Space = S_EVT_ACT_TBS_IDX

[Object 7137]
Type = Index
Name = S_EVT_ACT_F10
Table = S_EVT_ACT
Allow Reverse Scans = Yes
Column 1 = TARGET_OU_ID ASC
Column 2 = APPT_START_DT DESC
Column 3 = ROW_ID ASC

[Object 7138]
Type = Index
Name = S_EVT_ACT_F11
Table = S_EVT_ACT
Column 1 = PAR_EVT_ID ASC
Index Space = S_EVT_ACT_TBS_IDX
```

Guidelines for Preventing DB2 UDB from Running Out of ODBC Statement Handles

IBM DB2 UDB can quickly run out of ODBC statement handles, depending on the number of business objects your enterprise uses. Because it is difficult to know how many business objects your users actually use, you should increase this number automatically each time you install the DB2 UDB client, or when rebinding database utilities.

Increase the number of CLI packages to 6 by rebinding the CLI packages, using the special DB2 CLIPKG bind option.

To rebind the CLI packages

1   Navigate to sqllib/bnd in the DB2 instance home directory, using a method appropriate to your operating system.

2   Connect to the DB2 UDB database.

3   Enter the following command:

```
db2 bind @db2cli.lst blocking all grant public clipkg 6
```

For more information about the DB2 bind command and the CLIPKG option, see IBM documentation such as the *DB2 UDB Administration Guide*.

Guidelines for Increasing the Number of DB2 UDB User Processes Under AIX

When you reach about 400 concurrent database users running under AIX, the connection to DB2 may fail. To avoid this problem, reset the maximum number of user processes parameter on your AIX server.

To reset the parameter

1 Log on to the server as the AIX system administrator.

2 Navigate to $SIEBEL_HOME (Siebel Server root directory) and source environment variables, using one of the following commands, depending on the type of shell you use:

Bourne or Korn shell

```
.  ./siebenv.sh
```

> **TIP:** Make sure there is a space between the initial period and ./siebenv.sh.

C shell

```
source siebenv.csh
```

3 Execute the following command to review the options:

```
smitty chgsys
```

4 Select Maximum number of processes and reset the default (512) to a larger number; for example, 10,000, to avoid imposing an upper limit on the number of processes that a single user can spawn.

Guidelines for Determining DB2 UDB Log Space

You must create database transaction logs large enough to support various large transactions used by the Siebel software. On DB2 UDB, three parameters affect the amount of log space reserved:

■ **LOGFILSIZ.** The size of the log file.

■ **LOGPRIMARY.** The number of log files to preallocate and use.

■ **LOGSECOND.** Extra log files that are allocated only if they are needed for a large transaction.

To run on a large system, create approximately 1 GB of total log space. Create 25-50 primary log files of 32 MB each. These tasks are accomplished by setting the LOGFILSIZ database configuration parameter to 40000 and the LOGPRIMARY parameter to 25-50. In addition, to support very large transactions, set the LOGSECOND parameter to 128 minus the value of LOGPRIMARY.

Smaller systems may use less log space.

Guidelines for Archiving DB2 UDB Log Files

The database parameter LOGRETAIN is not enabled by default; this parameter may be important to you. When LOGRETAIN is set to OFF, the log files are reused in a circular fashion, and roll-forward recovery cannot be used. When LOGRETAIN is set to RECOVERY, all log files are kept on the system for the administrator to archive and delete.

If LOGRETAIN is set to NO, you can do only backup (restore) recovery and cannot do roll-forward recovery. This may have implications for your disaster recovery process related to your production environment database.

Have your database administrator (DBA) review the setting for this parameter as well as the USEREXIT parameter. For more information on these parameters, see IBM documentation.

Guidelines for Creating DB2 UDB Database Objects

To help you automate creation of the Siebel Database schema, Siebel Systems provides sample scripts (CrBlankDB2UDBSiebelDEMO.sql and CrBlankDB2UDBSiebelDEMOPostCrDB.sql), located in the $SIEBEL_ROOT/dbsrvr/DB2UDB directory. Use these scripts as a reference to create scripts based on your deployment's requirements for creating database objects for the Siebel schema.

Before using these scripts, make sure you read the file CrBlankDB2UDBSiebelDEMOReadMe.txt. See also "Overview of Database Configuration" on page 35.

Use a small, nonproduction environment for testing purposes.

After you install the Siebel Database Server files on the Siebel Server machine, as described in Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database," you may modify the database table and index creation scripts to specify the table space names you created for Siebel tables and indexes. For more information, see "Guidelines for Overriding DB2 UDB Default Table Spaces for Database Objects" on page 47.

These settings should be used only as guidelines for your initial configuration. Your final settings will vary based on the server hardware configuration, the number of users, and the type of workload.

Additional information on IBM DB2 UDB configuration is available from IBM, the hardware vendor, and other sources of documentation. Also refer to IBM documentation for additional information concerning tuning options for DB2 UDB.

Guidelines for Managing DB2 UDB Fragmentation

No strict guidelines can be offered as to which tables and indexes may be fragmented due to the variety in application and customer operation variables at any given customer site. However, database administrators (DBAs) should pay attention to the status of large or heavily used tables, because fragmentation of these tables can affect performance significantly. For a list of these Siebel tables, see the *Deployment Planning Guide*.

You should not reorganize S_ESCL_LOG, S_DOCK_INIT_ITEM, S_ESCL_ACTN_REQ, S_APSRVR_REQ, and all S_DOCK_INITM_%% tables (where % is a digit), because these tables are defined to be in append mode.

Use the following strategy to manage table fragmentation:

■ Run REORGCHK on heavily used tables, and then review the resulting reports and extract list of any fragmented objects.

■ Based on the results of REORGCHK, reorganize any tables, as needed, by running REORG TABLE. For details on how to reorganize tables or indexes, see FAQ 2072 and FAQ 2073 on Siebel SupportWeb.

■ After table reorganization, update statistics by using the `runstats` utility on any reorganized tables with the following minimum parameters:

`runstats on table` *tablename* `with distribution and detailed indexes all shrlevel change`

You may add other parameters as required, but use the `shrlevel change` parameter to allow concurrent access to your tables while `runstats` executes.

CAUTION: Because the `runstats` utility overwrites statistics loaded by Siebel applications, if you use `runstats`, you should always execute loadstats.sql afterwards, using either DB2 CLP or `odbcsql`. Otherwise, valuable statistics will be lost.

To run loadstats.sql using `odbcsql`, use the following command:

`odbcsql /s` *DATASOURCE_NAME* `/u` *username* `/p` *password* `/v` *separator siebsrvr_root*`/dbsrvr/ db2udb/loadstats.sql` *TABLEOWNER_NAME*

Configuring Oracle for Siebel Applications

This section contains guidelines for obtaining optimum performance from an Oracle database. These guidelines will be useful to a broad segment of customers. However, you should choose values for the parameters described in this guide that reflect conditions in your particular environment. For additional information, refer to Oracle technical documentation.

For additional relevant information, see "Overview of Database Configuration" on page 35.

NOTE: When Siebel Database Server scripts are executed in an Oracle database, as described in Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database," sequences are generated with the CACHE option. Do not drop these sequences and regenerate them with the NOCACHE option, or performance may be adversely affected and database contention may occur.

You should collect statistics for the tables, indexes, and histograms for the columns where the data shape is skewed. Recollect these statistics whenever a large amount of data have been updated, deleted, or inserted. For performance reasons, do not collect statistics for empty tables; for more information, see Alert 1162 on Siebel SupportWeb. For details on how to collect statistics, see Oracle administration manuals.

After you have completed configuring your DB2 UDB database, you can perform all Siebel installation tasks, including those described in Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database."

Guidelines for Configuring Oracle for Siebel Applications

Various kinds of guidelines are presented in this section for configuring an Oracle database:

Guidelines for Selecting a Language for Oracle

When creating your database, you must specify the character set at the database level. You specify other language characteristics at the database client level.

See also "Planning RDBMS Installation and Configuration" on page 22 and "Specifying the Locale for Siebel Applications" on page 26.

See also "Verifying System Preferences and Other Settings for Database Code Page" on page 169.

To specify the character set of your database

■ Run the following command to specify the character set for your database:

```
CREATE DATABASE INSTANCE_NAME CHARACTER SET CHARACTER_SET_NAME
```

where:

- ■ *INSTANCE_NAME* = The name of your Oracle instance

- ■ *CHARACTER_SET_NAME* = The textual name of the character set you want to run; for example, WE8MSWIN1252.

National character sets are not required for Siebel installation because the Siebel application does not use the three data types that can store data in the national character set (NCHAR, NVARCHAR2, NCLOB).

Sort Order and Date Format

Follow guidelines from Oracle for client-level settings for the NLS_SORT and NLS_DATE_FORMAT parameters.

Guidelines for Configuring Settings in the init.ora File

The init.ora file contains parameters that have a major impact on the performance of Siebel applications.

Use the following settings only as guidelines for your initial configuration. Your final settings will vary based on the hardware configuration, the number of users, and the type of workload.

In the init.ora file, Oracle provides default parameter values for small, medium, and large database configurations. Unless the configuration parameters are specified in the following settings, set them to the large database values. Refer to Oracle documentation for detailed descriptions of each of the parameters and their effects on database performance and system resource utilization.

Brief descriptions follow for several parameters for which you may need to adjust values:

■ **CURSOR_SHARING.** This parameter is set to EXACT by default and must not be changed. *Changing this value may lead to failure of some Siebel Server components.*

■ **DB_BLOCK_SIZE.** Small block size leads to high levels of row chaining and large numbers of levels in B*tree indexes, creating serious performance problems. Set the block size to a minimum of 8 KB to prevent excessive row chaining and performance degradation with Siebel EIM.

■ **DB_CACHE_SIZE.** The minimum recommended value is 10,000 blocks (assuming a block size of 8 KB). This yields 80 MB of block buffers. If significant I/O activity occurs, you can increase this value, if enough RAM is available.

In a production system, it is recommended that you assign this parameter a minimum value of 400 MB. Also, your system should have a minimum of 1 GB RAM.

NOTE: On Oracle 10g, this parameter does not apply if the DBA has set sga_target.

■ **DB_FILE_MULTIBLOCK_READ_COUNT.** The database buffer cache parameter dictates the number of data blocks read in a single Oracle I/O operation during a table scan.

For most implementations, this value should be set between 16 and 32 blocks and adjusted as necessary. You may want to set an initial value of 32. To reduce I/O overhead, this parameter should ideally be between 64 and 256 KB, depending on the tables undergoing scanning, the number of disk drives and devices, the table space structure, and other variables.

To optimize performance during upgrades, this value should be set higher than for installation or daily operation and the parameter ARCHIVE_LOGGING should be switched off.

■ **NLS_DATE_FORMAT.** Set the NLS_DATE_FORMAT parameter as needed. (The default setting is DD-MON-YY.) For information about the formats supported, consult your Oracle documentation. For more information, see .

■ **NLS_SORT.** The sort order is specified during the initial installation of a database and defines the way in which the database sorts character data. Sort order support depends on both the code page of the database and whether it will be used in a development or a production environment. For more information, see "Specifying the Locale for Siebel Applications" on page 26.

■ **Development environment databases.** Repository object names in your development environment database must sort using binary sort order, because Siebel Tools uses this sort order internally.

NOTE: Binary sort order is the simplest and fastest sort order to perform in the database. Binary sorting is case-sensitive and based on the numeric values (for example, 0 through 255 for an 8-bit character set) of characters in the installed character set.

You should specify the same sort order at the database client level, so that output there does not need to be resorted.

Customers are responsible for making sure that their data is backed up and restored correctly.

■ **Production environment databases.** For information on production environment database restrictions, see *System Requirements and Supported Platforms* on Siebel SupportWeb. Also refer to your Oracle documentation.

■ **OPEN_CURSORS.** This parameter controls the amount of spaces that should be reserved for the maximum number of cursors (a cursor being the same as an open query). The minimum open cursor requirement for Oracle support is 1000 and the maximum is 2000. This parameter may be adjusted according to observed usage patterns.

Setting this number higher than 2000 commits more memory for the database server, thereby affecting performance. Setting it lower than 1000 can cause an error that prevents you from continuing.

■ **OPTIMIZER_INDEX_COST_ADJ.** Set this parameter to 1. Use it to tune the optimizer to use index access path over a full table scan.

■ **OPTIMIZER_MAX_PERMUTATIONS.** (Applies to Oracle 9*i* only.) Set this parameter to 100. This parameter restricts the number of permutations of the tables the optimizer considers in queries with joins.

■ **OPTIMIZER_MODE.** Select the appropriate optimizer by setting this parameter. Only the Cost-Based Optimizer (CBO) is supported for your deployment.

NOTE: When upgrading Siebel Business Applications to version 7.8 on Oracle, you must use RBO mode. Set the optimizer to use RBO (RULE) for the upgrade, then set it back to use CBO (CHOOSE) after the upgrade. See the *Upgrade Guide*.

■ For the Cost-Based Optimizer (CBO), set OPTIMIZER_MODE to CHOOSE.

■ For the Rule-Based Optimizer (RBO), set OPTIMIZER_MODE to RULE.

■ **SHARED_POOL_SIZE.** Start with a minimum value of 200 MB in your production environment. A DBA should adjust this value upward based on the available physical memory of the hardware and performance.

Siebel Business Applications make heavy demands on the dictionary cache for columns. In Oracle, you cannot explicitly set the size of the column cache. Instead, column cache is set as a fixed percentage of the shared pool size. By setting a large shared_pool_size, you set a large column cache size.

The number of repositories active in your Siebel schema also adds to dictionary overhead because Siebel Business Applications maintains a record for each column in each table for each repository. As a result, if you have six active repositories, the Siebel dictionary is six times larger than it needs to be.

NOTE: On Oracle 10g, this parameter does not apply if the DBA has set sga_target.

■ **SORT_AREA_RETAINED_SIZE.** Use the default recommended by Oracle. See Oracle documentation for details.

NOTE: This parameter does not apply if the DBA has set pga_aggregate_target.

■ **SORT_AREA_SIZE.** This value is specified in bytes, and may be adjusted according to the number of users, the amount of RAM available, and the size of sorted queries. You should start with an initial value of 1,000,000 (1 MB). Optimal performance can be achieved for the Dictionary Managed TEMP table spaces if the extents are uniform and a multiple of the SORT_AREA_SIZE.

NOTE: This parameter does not apply if the DBA has set pga_aggregate_target.

Guidelines for Sizing Redo Logs for Oracle

If redo logs are too small, frequent log switches occur, creating resource-intensive Oracle check-pointing in which all dirty buffers are flushed. Although a range of 10 to 15 minutes or longer for log switching is preferable under a normal OLTP (Online Transaction Processing) load, during periods of heavy DML (data manipulation language) activity (for example, during large EIM loads or upgrades), the logs may switch more frequently than every two minutes. However, when this occurs, overall database performance will suffer as a result.

You can check the frequency of this operation either in the alert log or by querying v$loghist. It is best to use verification when there is the greatest activity and the heaviest load on the database.

If this activity occurs too frequently, drop and re-create individual redo log groups with larger sizes.

To achieve optimum performance, placing subsequent log file groups on alternative devices is critical. This precaution prevents the archiver process (ARCH) and the log writer process (LGWR) from competing for I/Os on the same device, because ARCH reads from the previous group, while LGWR is writing to the current group. This process causes the read-write head of the device to move back and forth, contributing to inefficient I/O. When log file groups are located on separate devices, the speed of both processes improves as they do not contend for the same hardware resource.

Guidelines for Creating Oracle Table Spaces

Initial (minimum) table space allocation recommendation is as follows:

■ Data—5 GB

■ Index—5 GB

■ Rollback segment—1 GB

This allocation is enough for a fresh installation of Oracle (Unicode-enabled or non-Unicode-enabled).

The following additional guidelines should help you in creating table spaces:

■ To improve performance on your production system, create at least two table spaces for Siebel implementation—one for indexes and one for data.

■ Distribute objects that you anticipate to be large or points of contention by creating additional separate table spaces (preferably on separate disk devices).

■ Be sure that you, or whoever is responsible for setting up permissions, grants the Siebel tableowner account the privilege and sufficient quota to create tables and indexes in these table spaces.

  Besides the tableowner, the database user ID used for Siebel Marketing also requires additional rights at the database level within the OLTP schema. You must grant drop table, drop index, create table, and create index rights to this user. For more details, see the *Siebel Marketing Installation and Administration Guide*.

■ Set storage parameters for your data and index table spaces. The Siebel installation procedure does not set storage parameters for the objects it creates. The storage configuration for each object follows the default storage parameters of its table space.

■ In a development or test environment, multiple Siebel Business Applications installations can coexist on one Oracle instance. Each Siebel installation should be installed under a separate tableowner, so that each schema owner will be unique. For example, more than one test environment can share one Oracle instance.

Guidelines for Sizing the Oracle Database

Use these guidelines to do initial sizing of your Oracle database:

■ Set the initial extent to a very small size (the minimum is one database block), so that empty tables and indexes do not consume large amounts of space. For example, start with either two or four blocks (in other words, 16 KB or 32 KB with an 8-KB block size). This allocation promotes less fragmentation.

  Even if you have 10,000 objects, this number of objects uses only 312 MB, which is far less space required than for some standard office software packages.

■ Set the default next extent for your data and index table spaces to a minimum of 100 KB.

■ Monitor object growth and fragmentation carefully and alter the storage parameters as required.

Guidelines for Creating Temporary Oracle Table Spaces

All user temporary table space definitions should be modified from the default of SYSTEM to the name of the temporary table space; for example, TEMP or TEMP_TS. Otherwise, SORT operations interfere with Oracle dictionary management.

To find out which users are assigned to which temporary table spaces, query the TEMPORARY_TABLESPACE column of DBA_USERS, and if any users are assigned to a table space other than the one allocated for temporary sort-type operations, correct the situation.

Guidelines for Defining Oracle Rollback Segments

Rollback segments (RBS) are used when a process is performing inserts, updates, or deletions (data manipulation language, or DML).

Oracle assigns each transaction to a rollback segment. As a rule of thumb, the total number of rollback segments required should be based on four concurrent transactions per rollback segment. However, database administrators should monitor their database and configure rollback segments based on the requirements of the Siebel applications running.

Use the following guidelines to make sure there are sufficient rollback segments for large implementations:

■ Create multiple rollback segments, each with multiple extents, at least, initially.

■ Calculate 5-10 active transactions (user activity consisting of an insert, update, or deletion) per extent, and from 2-6 extents per rollback segment.

Use the following guidelines to make sure there are sufficient rollback segments for smaller implementations:

■ Create a single, much larger rollback segment for Siebel Server components, such as Enterprise Integration Mgr (alias EIM), for Siebel EIM. Siebel Server components can point directly to this rollback segment when performing long-running queries.

■ To promote optimal system performance, create your rollback segments in a dedicated table space on a dedicated disk. Rollback segments typically support high I/O rates, so this action improves system performance measurably.

Guidelines for Partitioning an Oracle Database

Siebel Business Applications do not currently support Oracle partitioning. Siebel 6 and Siebel 7 development-to-production migration and version upgrade processes do not recognize partitioning. Therefore, do not propagate existing partitioning definitions to the new environment.

Guidelines for Overriding Oracle Default Table Spaces for Database Objects

Siebel Systems provides the option of overriding the default storage parameters for the table spaces in which specific tables or indexes are created. You created these table spaces using the instructions under "Guidelines for Creating Oracle Table Spaces" on page 57. To override these parameters, edit the ddl.ctl file located in the dbsrvr/oracle directory.

NOTE: The ddl.ctl file should be modified only by a qualified DBA.

For each Siebel object (table or index), you can specify a table space by using the Table Space parameter. In the following example, the table space for the table S_APP_VIEW is set to DATA1. As provided by the Siebel application, the .ctl file does not set storage parameters for the objects it creates, so that they default to the parameters of the table spaces in which they are created. However, the Table Space parameter only works under the following conditions:

■ The table does not yet exist (for example, when you are performing a new database installation).

■ The table needs to be rebuilt. In other words, there are schema changes made to the table such that an ALTER TABLE command is not sufficient to implement the schema changes, requiring that the Siebel application drop and re-create the table.

The following example illustrates the use of the Table Space parameter to set storage values for specific tables.

```
[Object 219]
Type = Table
Name = S_APP_VIEW
Column 1 = ROW_ID VARCHAR(15) NOTNULL
Column 2 = CREATED TIMESTAMP NOTNULL DEFAULT %NOW%
Column 3 = CREATED_BY VARCHAR(15) NOTNULL
Column 4 = LAST UPD TIMESTAMP NOTNULL DEFAULT %NOW%
Column 5 = LAST_UPD_BY VARCHAR(15) NOTNULL
Column 6 = DCKING_NUM NUMERIC(22,7) DEFAULT O
Column 7 = MODIFICATION_NUM NUMERIC(10,O) NOTNULL DEFAULT O
Column 8 = CONFLICT_ID VARCHAR(15) NOTNULL DEFAULT 'O'
Column 9 = NAME VARCHAR(5O) NOTNULL
Column 10 = DESC_TEXT VARCHAR(255)
Column 11 = LOCAL_ACCESS_FLG CHAR(1)
Table Space = data1
```

If you use locally managed table spaces and want to change the storage parameters, see your Oracle technical documentation.

For an example of overriding the defaults for specific tables and indexes, see "Guidelines for Overriding DB2 UDB Default Table Spaces for Database Objects" on page 47.

Guidelines for Creating Oracle Database Objects

To help you automate creation of the Siebel Database schema, Siebel Systems provides sample scripts (CrBlankOracleSiebelDEMO.sql and CrBlankOracleSiebelDEMOPostCrDB.sql), located in the $*SIEBEL_ROOT*/dbsrvr/Oracle directory. Use these scripts as a reference to create scripts based on your deployment's requirements for creating database objects for the Siebel schema.

Before using these scripts, make sure you read the file CrBlankOracleSiebelDEMOReadMe.txt. See also "Overview of Database Configuration" on page 35.

Use a small, nonproduction environment for testing purposes.

After you install the Siebel Database Server files on the Siebel Server machine, as described in Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database," you may modify the database table and index creation scripts to specify the table space names you created for Siebel tables and indexes. For more information, see "Guidelines for Overriding Oracle Default Table Spaces for Database Objects" on page 59.

These settings should be used only as guidelines for your initial configuration. Your final settings will vary based on the server hardware configuration, the number of users, and the type of workload.

Additional information on Oracle configuration is available from Oracle, the hardware vendor, and other sources of documentation. Also refer to Oracle documentation for additional information concerning tuning options for Oracle.

Guidelines for Ongoing Oracle Administration

After your Siebel Business Applications installation is up and running, monitor the following areas on a regular basis:

■ **Insertion rates on tables.** You will probably want to set the INI_TRANS value for tables with high insertion rates to a value higher than 1; a typical setting is 4.

   This parameter determines how many simultaneous inserts can occur on the database blocks that store data for those tables and, therefore, can affect performance in an intensive data-entry environment. Use multiple freelists for the table S_DOCK_TXN_LOG, because this table receives numerous inserts.

■ **SGA cache hits.** Determine whether SGA parameters need to be adjusted for your system.

■ **The extents used by each object.** A large number of extents on a table or index creates response time degradation for transactions that access the table or index.

■ **Siebel tables that are subject to frequent INSERT and DELETE operations.** This transaction mixture can cause some databases to become fragmented over time.

   If you are using Siebel Remote, your Database Administrator should monitor the space utilization and fragmentation of the tables listed below, and perform regular database maintenance procedures as recommended by your database vendor. Monitor the following tables, in particular, because they will have frequent changes when transaction logging is enabled:

```
S_DOCK_TXN_LOG
S_DOCK_TXN_LOGT
S_DOCK_TXN_SET
S_DOCK_TXN_SETT
S_DOCK_INST
S_DOCK_INIT_ITEM
```

Your Database Administrator may also choose to monitor all tables and indexes in the Siebel Schema, reorganizing them when required.

■ **Rollback segments.** Make sure that you have enough segments available and that they are the optimum size for the most common operations.

Guidelines for Using Real Application Clusters for Oracle

Siebel applications support Real Application Clusters (RAC) failover configurations for an Oracle database. Both Active/Passive and Active/Active RAC are supported.

NOTE: Siebel deployments using Siebel Remote can use Active/Passive RAC. Siebel deployments that do not use Siebel Remote can use either Active/Passive or Active/Active RAC.

For more information, see FAQ 2220 on Siebel SupportWeb, *System Requirements and Supported Platforms* on Siebel SupportWeb, and Oracle documentation *Real Application Clusters Concepts*.

4 Creating the Siebel Installation Image on the Network

This chapter describes how to create a network image from which you install Siebel software. It includes the following topics:

- *"Obtaining Siebel Installation Media Files" on page 63*
- *"Siebel Installation Media Contents" on page 66*
- *"Preparing to Create a Siebel Installation Image" on page 67*
- *"Creating a Siebel Installation Image" on page 70*
- *"Troubleshooting Siebel Image Creation" on page 74*

Obtaining Siebel Installation Media Files

Siebel Business Applications are installed from a network image you create from Siebel media files using the Siebel Image Creator utility. Siebel media files are compressed JAR files (Java Archive files). You can obtain the Siebel media JAR files and the Siebel Image Creator utility from these sources:

- **FTP.** Siebel media files and the Image Creator utility may be provided on your FTP site on Siebel SupportWeb. Download these files into a single flat directory on your network, then run Image Creator from that directory to create the image.
- **DVD.** Siebel media files and the Image Creator utility are provided on DVDs shipped by Siebel Systems. Copy these files into a single flat directory on your network, then run Image Creator from that directory to create the image.

NOTE: For more information, see *Media Request, Delivery and Usage Overview for Siebel Releases*, available on Siebel SupportWeb at this location: http://supportweb.siebel.com/support/private/content/general/FAQs_Media_Request_Usage_Overview.html. In the SupportWeb Knowledge Base, this document can be found under the link Using Technical Services. See also *Siebel Business Application Version Numbering*, also available under Using Technical Services.

Siebel Media Files Available Using FTP

You can use your Web browser, FTP commands, or an FTP utility to download the Siebel media files (JAR files) and other required files from Siebel SupportWeb. Download all files to a central network location, such as the location where you will run the Image Creator utility.

To access the FTP site, log in to Siebel SupportWeb, then click the Browse/Search Knowledge Base link. Within the Knowledge Base, click the FTP link in the upper-right area of the page. This displays the File Upload/Download page, which provides information about using the Siebel FTP site and allows you to log in to the restricted area using your FTP username and password.

Siebel media files are provided on a customer area set up for you on the Siebel FTP site, when such files are requested by customers who have purchased Siebel products. Requests are made through Siebel SupportWeb. Additional FTP access information is typically provided through email.

Your FTP site contains folders representing current product releases you have requested and are entitled to receive. In general, the contents of these folders corresponds to DVDs that are available as another means of delivering the Siebel media. However, some folders may represent patch releases that are not available on DVD. The FTP site also includes the Image Creator executable program and files it requires.

Download the media files for each folder representing products or languages you will require into one or more target locations. As appropriate, review the JAR file sizes before you download.

For each applicable Siebel version, the FTP media folder names are listed in Table 11 on page 64, along with the corresponding DVD titles (which are also listed in Table 12 on page 65), where DVDs are available. You use these FTP media folder names when downloading Siebel media.

Table 11. Siebel FTP Media Folder Names

Description / DVD Media Title (where applicable)	FTP Media Folder Name
Siebel Business Applications for Windows	sea_*version*_base_windows
Siebel Industry Applications for Windows	sia_*version*_base_windows
Siebel Business Applications for *UNIX_OS*	sea_*version*_base_aix sea_*version*_base_hpux sea_*version*_base_solaris
Siebel Industry Applications for *UNIX_OS*	sia_*version*_base_aix sia_*version*_base_hpux sia_*version*_base_solaris
Siebel Business Applications *Language* Language Extensions	sea_*version_language*
Siebel Industry Applications *Language* Language Extensions	sia_*version_language*
Siebel Business Applications Encryption	sea_*version*_crypto
Siebel Industry Applications Encryption	sia_*version*_crypto

where:

■ *version* = The Siebel release level or version, such as 7.8.2.0, 7.8.2.1, and so on

■ *UNIX_OS* (DVD title) = UNIX operating system name: AIX, HP-UX, or Solaris

■ *Language* (DVD title) = A supported Siebel language, such as U.S. English (ENU), French (FRA), and so on

■ *language* (FTP folder name) = The Siebel code for a supported language, such as enu for U.S. English, fra for French, and so on

For more information about the contents and organization of the Siebel media files, see "Siebel Installation Media Contents" on page 66.

Before you download the files to your network, see "Preparing to Create a Siebel Installation Image" on page 67.

Siebel Media Files Available on DVD

Siebel product media files are provided on DVD as well as through FTP. Each DVD also includes the Image Creator executable program and files it requires. Copy all files to a single flat directory in a network location, where you will run the Image Creator utility.

Accessing Siebel media provided on DVD requires a compatible DVD drive (+R compatible). You must use an appropriate mount command to mount each DVD before you can access its contents.

NOTE: Siebel DVD media support Rock Ridge extensions. On some UNIX operating systems, such as HP-UX, the mount command requires the -o rr switch to mount Rock Ridge-compliant media properly. For more information, consult the manpages of your operating system for the mount CDFS command.

Copy the media files for each DVD representing products or languages you will require into one or more target locations. As appropriate, review the JAR file sizes before you copy them. Each DVD uses up to 5 GB of storage.

For each applicable Siebel version, the available DVDs are listed in Table 12 on page 65, along with the corresponding volume labels. You use these volume labels when accessing Siebel DVDs, particularly when mounting a DVD device.

Table 12.   Siebel DVD Media Titles and Volume Labels

DVD Media Title	DVD Volume Label
Siebel Business Applications for Windows	SEA_*version*_Base_Windows
Siebel Industry Applications for Windows	SIA_*version*_Base_Windows
Siebel Business Applications for *UNIX_OS*	SEA_*version*_Base_AIX SEA_*version*_Base_HPUX SEA_*version*_Base_Solaris
Siebel Industry Applications for *UNIX_OS*	SIA_*version*_Base_AIX SIA_*version*_Base_HPUX SIA_*version*_Base_Solaris
Siebel Business Applications *Language* Language Extensions	SEA_*version_language*
Siebel Industry Applications *Language* Language Extensions	SIA_*version_language*
Siebel Business Applications Encryption	SEA_*version*_Crypto
Siebel Industry Applications Encryption	SIA_*version*_Crypto

where:

■ *version* = The Siebel release level or version, such as 7.8.2.0, 7.8.2.1, and so on

■ *UNIX_OS* (DVD title) = UNIX operating system name: AIX, HP-UX, or Solaris

■ *Language* (DVD title) = A supported Siebel language, such as U.S. English (ENU), French (FRA), and so on

■ *language* (DVD volume label) = The Siebel code for a supported language, such as enu for U.S. English, fra for French, and so on

For more information about the contents and organization of the Siebel media files, see "Siebel Installation Media Contents" on page 66.

Before you copy the files to your network, see "Preparing to Create a Siebel Installation Image" on page 67.

Siebel Installation Media Contents

For each product release, the Siebel products are provided on media that include base, encryption, and Language Extension Pack (LEP) files, which are also referred to as Language Packs or language media.

Base media requires one or more Language Packs for successful installation. All Siebel product deployments include base and language media. The use of encryption media is optional. Media for third-party products are also provided.

All media files are provided as compressed JAR files distributed through FTP or on multiple DVDs. You must run the Siebel Image Creator utility in order to create a network image from all applicable media files.

As the Siebel image is created, each media file is extracted and the product's directories and files are copied to the image. All installations must be performed from the network image.

For more information about how Siebel media files are delivered, see "Obtaining Siebel Installation Media Files" on page 63.

Base Media

The base media for Siebel products are organized by platform, product category, and product name. Language support is delivered separately through language media. Media platforms are:

■ Windows

■ AIX

■ HP-UX

■ Solaris

For detailed support information about the above platforms, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

Base media for the above platforms are provided through folders containing media files you can download using FTP. Note the following points regarding base media file organization:

■ Windows client base media files are included with base media for AIX, HP-UX, and Solaris, as well as with other Windows base media.

■ Third-party media are included with base media for Windows, AIX, HP-UX, and Solaris platforms.

Base media also includes third-party or ancillary components, which provide support for installable third-party software modules that work with the Siebel applications. Some third-party modules are installed on servers, while others are installed on clients.

Third-party software modules are not installed through Siebel installers. They may be documented in this guide (*Siebel Installation Guide* for the operating system you are using), in other books on the *Siebel Bookshelf*, or in third-party documentation provided on the *Siebel Business Applications Third-Party Bookshelf*. Language media provided for the Siebel base media do not apply to third-party software.

Encryption Media

The encryption media provides the Siebel Strong Encryption Pack, which offers encryption support for server and client products, and is installed following installation of the base products. Language Packs are not directly associated with the Strong Encryption Pack; they are associated only with the base products.

NOTE: The Siebel Strong Encryption Pack is available from Siebel Systems on separate distribution media, and requires a separate installation into your existing Siebel Server environment. The Strong Encryption Pack is not available outside the United States, due to export restrictions. For more information, see the *Security Guide for Siebel Business Applications* and see Technical Note 566 on Siebel SupportWeb. When you run Image Creator, select the Encryption product only if you have received media files for this option.

Language Media

Language Extension Pack (LEP) media, also known as Language Packs or language media, provide language support for Siebel applications.

When you run Image Creator to create a Siebel image or add products to an existing image, you specify languages for all products you include in the image. Alternatively, you can also add languages for all products in an existing image, as you might do for a language you require that becomes available after an initial product release.

Similarly, when you install Siebel products, you can include languages when you install, or add languages to an existing product installation. Adding languages to products may require installing a patch release (each patch release requires a separate Siebel image). Additional steps are required for implementing a new language in your Siebel deployment.

For information about supported languages, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

Preparing to Create a Siebel Installation Image

Before you create a Siebel installation image on your network, review the issues presented in this section.

Determine Location for Siebel Media Files and Siebel Images

You download or copy all Siebel media files to a central location on your network where you have sufficient disk space. This may be the same location where you will create your Siebel image, or a subdirectory of this location.

For example, if you will create Siebel images on a Windows system, you might create a directory D:\Siebel_Install_Image, in which to store all of your Siebel images and all Siebel media files. You might then create a subdirectory JAR_7.8.2.0, in which you will place all Siebel media (JAR) files you will use to create a Siebel image for version 7.8.2.

In this scenario, if you run Image Creator, specify D:\Siebel_Install_Image as the top-level directory. The utility will automatically create another subdirectory, 7.8.2.0, to contain the installable Siebel products (by platform) you choose to include in the image. So, your applicable directories would be:

■ D:\Siebel_Install_Image\JAR_7.8.2.0 (you create directory and subdirectory)

■ D:\Siebel_Install_Image\7.8.2.0 (Image Creator creates subdirectory)

The default top-level names for Siebel image directory are C:\Siebel_Install_Image (on Windows) and /Siebel_Install_Image (on UNIX).

NOTE: Siebel Business Applications (formerly *Siebel eBusiness Applications*) and Siebel Industry Applications cannot both reside in the same Siebel image. If you will create network images for both of these sets of applications, you should specify a top-level directory name that indicates the image type—for example, by appending SEA or SIA at the end of the top-level directory name. You also specify the type while you run Image Creator, which stores this information internally.

Requirements for Siebel Image Directories

The directory in which you will create a Siebel image, or the directory that you will specify as the location for Siebel media files, must meet the following requirements:

■ The user creating the network image must have write permission in the Siebel image directory.

   Users who need to access the Siebel image directory in order to perform installations must have read and execute permissions. Users who need to modify siebel.ini files to support console or unattended installation modes, or use other installation features requiring modification to siebel.ini files, must also have write permission.

   See also Chapter 2, "Preparing for Installation," and Chapter 5, "Installing in Unattended and Console Modes."

■ Any directory you specify for creating the Siebel image must contain sufficient disk space for all Siebel products and languages you will include in the Siebel image. Each DVD uses up to 5 GB of storage.

■ Any directory you specify for adding products or languages must contain an existing Siebel image. For example, if you are adding products or languages to a version 7.8.2 Siebel image, the directory you specify, such as /export/home/Siebel_Install_Image, must contain a subdirectory 7.8.2.0, which must contain an existing Siebel image.

■ Any directory you specify for creating the Siebel image should follow the conventions described in "File and Directory Naming Conventions" on page 30. For example, on Windows, a directory name must not contain spaces or number (pound, or hash) signs.

■ If a Siebel image will include any client component, such as Siebel Mobile Web Client or Siebel
Tools installation files, the target directory structure must not include the word *disk1* anywhere
in the directory path.

■ Do not copy or move any Siebel image subdirectories. Create each Siebel image and all of its
directories by running Image Creator. It is acceptable to move or rename the top-level directory
in which the Siebel image was created.

Cross-Platform Issues in Creating Siebel Image Directories

Each network image you create will contain directories representing specified operating system
platforms you will support, such as Windows, AIX, and so on. The image itself can reside on any
supported platform. Image Creator can run natively on Windows, AIX, Solaris, and HP-UX.

If you support multiple platforms, you must use a cross-platform networking tool, such as Samba,
to make a Siebel image accessible from multiple platforms. This issue does not apply, however, if you
create a separate Siebel image for each platform, where the image is created on the same platform.

Requirements for Running Image Creator Utility

Before you run Image Creator for your chosen platform, consider the following requirements:

■ Make sure the following files are in the same directory: imagecreator.jar, media.inf, and
siebel.ini. Do not modify these files.

■ At least one JAR file representing a Siebel product must also exist in the same directory in order
for Image Creator to determine the Siebel version of the image to be created. All other product
JAR files for the same version may also exist in the same directory or in one or more other
directories you specify while running Image Creator.

■ You can run Image Creator in either GUI mode or console mode.

■ If you click Cancel while running Image Creator, you may need to rerun Image Creator. For more
information, see "Troubleshooting Siebel Image Creation" on page 74.

■ An Image Creator session may take a long time to complete. While files are being extracted or
copied, you cannot click Cancel to cancel an Image Creator session. You should be sure of your
selections before you begin creating the Siebel image.

■ If necessary, you can force overwriting existing image files during an Image Creator session,
such as if you are recovering from a failed image creation. For more information, see
"Troubleshooting Siebel Image Creation" on page 74.

Creating a Siebel Installation Image

You use the Siebel Image Creator utility to create the Siebel installation image on the network for
all Siebel products delivered through Siebel media described in "Siebel Installation Media Contents"
on page 66.

The procedures in this section describes running the Image Creator utility to create a new Siebel
image or running the utility to add products or languages to an existing Siebel image. When you add
products or languages to an existing image, some steps do not apply.

You can run Image Creator in either GUI mode or console mode, as described in the sections that
follow. Installations of Siebel products from a Siebel image can be launched in GUI, console, or
unattended modes, depending on the platform and product.

For Image Creator procedures, see "Running Siebel Image Creator in GUI Mode" on page 70 or
"Running Siebel Image Creator in Console Mode" on page 73.

If necessary, see also "Troubleshooting Siebel Image Creation" on page 74.

Running Siebel Image Creator in GUI Mode

This section describes how to run Siebel Image Creator in GUI mode. See also "Running Siebel Image
Creator in Console Mode" on page 73.

To create a Siebel installation image

1 Obtain the Siebel media files, as described in "Obtaining Siebel Installation Media Files" on
page 63.

2 Review the information presented in "Siebel Installation Media Contents" on page 66.

3 Review the issues described in "Preparing to Create a Siebel Installation Image" on page 67. In
particular, determine where the Siebel media files reside and where to create the Siebel image.

4 Log on to the server on which you will run the Siebel Image Creator utility.

For users who downloaded Siebel media files using FTP or copied Siebel media files from DVDs
to the network, go to Step 5 on page 70.

5 Navigate to the directory where you downloaded or copied the Siebel media files and the Image
Creator utility and its related files. For example, you might navigate to a directory like /
Siebel_Install_Image/JAR_7.8.2.0.

6 Run the Image Creator utility.

Run the utility from the location where you downloaded or copied the Siebel media files and the
Image Creator utility to the network. On UNIX platforms, run *UNIX_OS_*ImageCreator, where
UNIX_OS is aix, hpux, or sol.

NOTE: If you need to force overwriting of existing files in a Siebel Image Creator session, run
the utility from a command line and include the options -args Overwrite=yes. (The default
behavior is equivalent to using Overwrite=no.) See also "Troubleshooting Siebel Image Creation"
on page 74.

The utility displays the message Welcome to the InstallShield Wizard for the Siebel Image
Creator Utility.

7 Click Next.

8 Specify whether you will create a new image (or add products to an existing image) or add
languages to an existing image. Click Next.

9 Specify the directory in which the image is to be created. For example, you might navigate to a
directory like /export/home/Siebel_Install_Image. You can enter a directory (it must be an
absolute path) or click Browse to specify the directory. Click Next.

NOTE: On UNIX platforms, after you click Browse, click once to select a directory. (Double-
clicking adds the directory name twice.)

For guidelines for creating directories for Siebel images, see "Preparing to Create a Siebel
Installation Image" on page 67.

10 If applicable, specify the version for the Siebel image.

The image version is automatically derived from the presence of one or more Siebel media files
(JAR files) for Siebel products in the directory from which you are running Image Creator. If JAR
files exist representing multiple versions, then you can specify one of the applicable versions.

The version determines the version-specific subdirectory in which the image will be created or
added to, such as 7.8.2.0.

If you are adding products to an existing image, go to Step 12 on page 72.

If you are adding languages to an existing image, go to Step 14 on page 72.

11 Specify the application type, either Enterprise (SEA) or Industry (SIA).

If you are adding products or languages to an existing image, this screen does not appear.

For more information about the application type, see "Preparing to Create a Siebel Installation
Image" on page 67.

12 Specify one or more platforms to include in your version-specific Siebel image. You can specify Windows, Solaris, AIX, and HP-UX. Click Next.

You can specify any number of platforms to include in your image. In general, include all platforms for which you will implement one or more Siebel products. You can add platforms and products to the image later.

If you are adding languages to an existing image, this screen does not appear.

For more information about contents of the Siebel media, see "Siebel Installation Media Contents" on page 66.

13 Specify the products to include in your version-specific Siebel image. Click Next.

Each product can be selected by clicking its checkbox. The list of products that appears applies to the application type you specified in Step 11 on page 71. The listed products represent the superset of client and server products, including third-party products, that are supported for all platforms by this version of the Image Creator utility.

Selected products will be included in the image for each platform to which they apply. Some products do not apply to certain platforms. For example, Siebel Tools applies only to Windows.

If you are adding languages to an existing image, this screen does not appear.

For more information about contents of the Siebel media, see "Siebel Installation Media Contents" on page 66.

14 Specify all languages you want to include in the Siebel image. Click Next.

Languages are included for each selected or existing product, where they apply. Languages do not apply to some products, such as Siebel Encryption, or third-party products.

NOTE: If you are adding products to an existing image, you must specify all languages previously included in the image, in order to be able to install these products correctly.

Image Creator now processes all Siebel media files in the current directory, and includes all selected products and languages in the version-specific Siebel image subdirectory of the directory specified in Step 9 on page 71. Image Creator displays the current processing status.

■ If all Siebel media files matching your selections were found in the current directory, Image Creator completes creating or adding to the Siebel image. Go to Step 16 on page 73.

■ If one or more files matching your selections were not found in the current directory, the utility prompts for the location of the next file. Go to Step 15 on page 73.

15 Specify the location of the indicated Siebel media file. You can enter a directory (must be an absolute path) or click Browse to specify the directory. Click Next.

NOTE: On UNIX platforms, after you click Browse, click once to select a directory. (Double-clicking adds the directory name twice.)

For example, assume, for a version 7.8.2 image, that you selected the Enterprise application type, Windows platform, and Siebel Tools product, but Image Creator could not locate the file SEA_7.8.2.0_Base_Windows_Siebel_Tools.jar. Specify the location of this file, and click Next. If the file is found, it will be processed and the product it represents will be included in your image.

If you do not have the current media file, you can download it from Siebel Systems and place it in the specified directory before clicking Next. If all remaining Siebel media files matching your selections were found in the current directory, Image Creator completes creating or adding to the Siebel image.

If you decide that you do not require the product or language represented by the current media file to be included in the image at this time, click Next again. You will be prompted to either skip the file (Skip) or look for the file in another directory (Select).

16 After all products or languages have been added to the Siebel image, or skipped, Image Creator indicates that the Siebel image has been successfully created. Click Finish.

Running Siebel Image Creator in Console Mode

This section describes how to run Siebel Image Creator in console mode. See also .

To run Siebel Image Creator in console mode

1 From a DOS prompt, navigate to the directory where you downloaded Image Creator and the Siebel media files.

2 Execute the following command:

```
Windows_ImageCreator.exe -is:javaconsole -console
```

NOTE: There should be no spaces before and after the equals sign in the command.

The console mode script for Image Creator appears. For details about each prompt, see .

NOTE: If you need to force overwriting of existing files in a Siebel Image Creator session, include the options -args Overwrite=yes. (The default behavior is equivalent to using Overwrite=no.) See also .

To run Siebel Image Creator in console mode on UNIX

1 Open a new shell and navigate to the directory where you downloaded Image Creator and the Siebel media files.

2 Execute the following command:

> ./*UNIX_OS*_ImageCreator –is:javaconsole –console

where:

- *UNIX_OS* = Your UNIX operating system, such as AIX, Solaris, or HPUX (for HP-UX).

For example, on Solaris, you might enter:

> ./Solaris_ImageCreator –is:javaconsole –console

NOTE: There should be no spaces before and after the equals sign in the command.

The console mode script for Image Creator appears. For details about each prompt, see "Running
Siebel Image Creator in GUI Mode" on page 70.

NOTE: If you need to force overwriting of existing files in a Siebel Image Creator session, include
the options –args Overwrite=yes. (The default behavior is equivalent to using Overwrite=no.)
See also "Troubleshooting Siebel Image Creation" on page 74.

Troubleshooting Siebel Image Creation

When you run Image Creator, the utility validates the integrity of each JAR file it processes as it
creates the Siebel image. Consequently, it is unnecessary to validate JAR files beforehand.

If a JAR file is invalid, as may sometimes be the case when you have downloaded files using FTP,
Image Creator displays a message to this effect. Obtain a new copy of the JAR file and rerun Image
Creator in order to include the content in the image. Rerunning Image Creator may be necessary in
some other cases, which are identified below.

When you run Image Creator and create an image successfully, the files in the image have the same
timestamp as the corresponding files that were included in the JAR files.

When you rerun Image Creator, by default it will not replace any files that have the same or a newer
timestamp. In order to force replacing files that have the same or a newer timestamp, run Image
Creator at the command line and include the parameter setting Overwrite=yes. For details, see
"Running Siebel Image Creator in GUI Mode" on page 70 or "Running Siebel Image Creator in Console
Mode" on page 73.

TIP: Running Image Creator with Overwrite=yes will re-create the Siebel image, including all
selected platforms, products, and languages. Select only those items that you require to correct a
problem, rather than reselecting all items and overwriting all the files in an existing image.

Rerunning Image Creator may be necessary in the following cases:

- If you have deleted a Siebel image, or any part of a Siebel image, in error.
- If a JAR file is invalid, and you have since obtained a new version of the JAR file.
- If you skipped a missing JAR file during an Image Creator session, and have since obtained the
  missing JAR file.

■ If you ended an Image Creator session by clicking Cancel. (You can click Cancel before you have
processed any JAR files, or when you are prompted to specify the location of a JAR file. You
cannot click Cancel while Image Creator is currently processing a JAR file.)

■ If an Image Creator session ended through power outage or some other failure. (In this case,
run Image Creator at the command line and include the parameter setting Overwrite=yes.)

TIP: Keep track of the platforms, products, and languages in your Siebel image for the applicable
version. If you need to rerun Image Creator, reselect the options you will need to complete the Siebel
image.

Image Creator logs details about its processing in the file log.txt. You can review the log file to
identify where problems may have occurred when creating the Siebel image.

■ Image Creator logs a message like the following after each JAR file has been successfully
extracted. (If a JAR file is only partially extracted, this message will not have been written.)

> Extracted SEA_7.8.2.0_Base_Windows_Siebel_Enterprise_Server.jar

■ Image Creator logs a message like the following when a JAR file has been skipped.

> Skipped *JAR_file_name* - Please run Siebel Image Creator again and add *product_name*
> to the network image, once all image files are available.

If, when you run a Siebel product installer, errors are returned about missing files, then you should
run Image Creator again (you may need to use Overwrite=yes). Be sure you include all necessary
platforms, products, and languages in your Siebel image for the applicable version. Other
requirements apply to running Siebel installers, as described in the chapters for installing particular
Siebel modules.

5 Installing in Unattended and Console Modes

This chapter provides instructions for installing without the installation GUI, that is, by using unattended mode or console mode. It includes the following topics:

About Installing in Unattended or Console Mode

For performance or security reasons, you may choose to install the Siebel Business Applications servers using either unattended or console mode, instead of GUI mode. Instructions for installing in GUI mode are provided in subsequent chapters.

You can perform unattended or console mode installation for Siebel Gateway Name Server, Siebel Server, or Siebel Web Server Extension. For all other modules, you must install in GUI mode.

Use one of these modes for security or performance reasons in the following kinds of situation:

- **Unattended mode.** Use unattended installation mode, sometimes referred to as silent installation mode, if user input of configuration parameters during the installation is not allowed in your environment. This may be the case in some secure environments.

  Unattended installation prepackages the required parameters so that you only need to execute a command to perform installation.

  NOTE: Unattended installation provides no feedback or error notification; therefore, it is vital that you test your configuration in a development environment before system-wide deployment in a production environment.

- **Console mode.** Use console installation mode when installing multiple servers simultaneously.

  Consider using console installation mode when installing over a WAN or VPN. Depending on your environment, installing in GUI mode can use large amounts of bandwidth, which could result in undesirable lag times during installation over WAN or VPN. Console-mode installation provides a text-only interface that lets you bypass the Java-based GUI.

  NOTE: If you are installing from a remote machine, or using X-connectivity software to access a UNIX machine from a Windows machine, see also "Installing from a Remote Server Machine" on page 29.

Installing in Unattended Mode

This section describes installing in unattended mode.

Process of Unattended Installation

The unattended installation process requires multiple tasks that you should perform in the following sequence:

1 "Editing siebel.ini Files for Unattended Installation" on page 78.

2 "Running the Installation from the Command Line" on page 81.

3 The above topics also apply to configuration in unattended mode. See also:

■ "Editing siebel.ini Files for Unattended Configuration of Individual Servers" on page 81.

■ "Sample Parameter Values for siebel.ini Files for Unattended Configuration" on page 82.

4 "Installing Siebel Reports Server in Unattended Mode" on page 88.

NOTE: You can combine console mode and unattended mode installation. For details, see "Combining Console Mode and Unattended Mode Installation" on page 94.

Editing siebel.ini Files for Unattended Installation

You can perform unattended installation following two different scenarios:

■ Perform unattended installation and then perform configuration in GUI mode, or

■ Perform unattended installation and configuration together.

Before starting unattended installation, you may need to modify portions of multiple siebel.ini files, which are referenced in the procedures that follow:

■ One siebel.ini file is for the main installer. For the Siebel Enterprise Server, for example, this file is located in *UNIX_OS*/Server/Siebel_Enterprise_Server, where *UNIX_OS* is either AIX, Solaris, or HPUX (for HP-UX). You modify the siebel.ini file for the main installer in both unattended installation scenarios. If you are *not* also performing unattended configuration, you set certain configuration keys in this file to no.

■ Additional siebel.ini files are for configuration of individual modules of the Siebel Enterprise Server. You modify the siebel.ini files for these modules if you are also performing unattended configuration. For example, siebel.ini files for individual configuration of Siebel Gateway Name Server and Siebel Server are located in the following places:

■ *UNIX_OS*/Server/Siebel_Enterprise_Server/gtwysrvrcfg/siebel.ini (for Siebel Gateway Name Server)

■ *UNIX_OS*/Server/Siebel_Enterprise_Server/siebsrvrcfg/siebel.ini (for Siebel Server)

NOTE: In siebel.ini files, the value $(Slipstream)=no contains a variable and should not be modified. The value means that means that the parameter applies if the Siebel product is *not* being installed using slipstream installation. For more information about slipstream installation, see "About Installing Siebel Releases" on page 15 and see the applicable *Maintenance Release Guide* on Siebel SupportWeb.

To modify the siebel.ini file for the main installer

1 Using a text editor, modify the siebel.ini file for the installer for the appropriate product. The locations of siebel.ini files are listed below.

NOTE: Make a copy of each siebel.ini file you plan to modify, and save it in a unique location that identifies the module it pertains to. Preserve these copies in case you may need them for later reference.

■ **Siebel Enterprise Server.** *UNIX_OS*/Server/Siebel_Enterprise_Server/siebel.ini.

■ **Siebel Web Server Extension.** *UNIX_OS*/Server/Siebel_Web_Server_Extension/siebel.ini.

where:

■ *UNIX_OS* = Your UNIX operating system, such as AIX, Solaris, or HPUX (for HP-UX).

CAUTION: When you modify a siebel.ini file, make sure that you enter the correct values, because your entries are not validated by the installer.

2 In the siebel.ini file, locate the [Dialog] section and set all keys to no, except the ones starting with *Uninst*, to disable all prompts.

3 Locate the [Behavior] section and set Silent to yes. This logs all errors instead of displaying them.

4 Locate the [Defaults.Unix] section and set RootDirectory to the product installation root directory.

NOTE: If you are installing a full product installation, specify the location where you will install the product. If you are installing a patch, specify the location of the existing installation to which you are applying the patch. For more information about patch installation, see the *Maintenance Release Guide* for the release.

5 Locate the [Defaults.ProductSelection] section and set those products you want to install to yes.

6 Locate the [Defaults.LanguageSelection] section and set the languages you want to install to yes. For example, if you want to install both U.S. English and French, then include the following lines:

```
[Defaults.LanguageSelection]
ENU = yes
FRA = yes
```

7 If you will be performing unattended installation only (without unattended configuration), locate the [RunAfter.Unix] section for the siebel.ini file you are updating, and set configuration keys. You set these keys to specify that the Siebel Software Configuration Wizard will *not* be invoked when installation is complete.

For example, set the following keys:

■ Siebel Enterprise Server

```
[RunAfter.Unix]
ConfigGtwysrvr = no
ConfigSiebsrvr = no
```

■ Siebel Web Server Extension

```
[RunAfter.Unix]
Config.SWSE.Unix = no
```

NOTE: After installing in unattended or console mode, to configure the individual modules controlled by these keys, you must run the Siebel Software Configuration Wizard.

8 If you will be performing both unattended installation and configuration, locate the [RunAfter.Unix] section for the siebel.ini file you are updating, and set configuration keys. You set these keys to specify the siebel.ini files that control the configuration of each applicable module.

■ [ConfigGtwysrvr]

```
Condition = $(GatewaySelected)=yes, $(Patch)=no
Execute = $(JavaHome)/bin/java
Arg = -cp $(CDPath)/gtwysrvrcfg/setup.jar run -args SS_SETUP_INI=Full path to the
modified configuration ini file, including the filename
StringTable = $(UninstallPath)/table.txt
```

■ [ConfigSiebsrvr]

```
Condition = $(SiebelSelected)=yes, $(Patch)=no
Execute = $(JavaHome)/bin/java
Arg = -cp $(CDPath)/siebsrvrcfg/setup.jar run -args SS_SETUP_INI=Full path to the
modified configuration ini file, including the filename
StringTable = $(UninstallPath)/table.txt
```

■ [Config.SWSE.Unix]

```
Condition = $(Patch)=no
Execute = $(JavaHome)/bin/java
Arg = -cp $(CDPath)/config/setup.jar run -args SS_SETUP_INI=Full path to the
modified configuration ini file, including the filename
StringTable = $(UninstallPath)/table.txt
```

CAUTION: Do not modify the table.txt file.

NOTE: For more details on parameters in the configuration files, see "Sample Parameter Values for siebel.ini Files for Unattended Configuration" on page 82.

Running the Installation from the Command Line

After you have modified the appropriate siebel.ini files in the previous procedure, run the unattended installation from the command line. However, before running an unattended installation, be aware of the following guidelines:

■ You must have a Siebel image created to use for installation. For more details on creating a Siebel image, see Chapter 4, "Creating the Siebel Installation Image on the Network."

■ Any data entry error that you make during installation is captured in the installation log file log.txt, located in the $*SIEBEL_ROOT* directory. Consider using the -log *logfile* option to create an additional setup initialization log file.

■ You can also perform unattended configuration.

NOTE: These instructions are for installing the Siebel Enterprise Server using unattended mode. Installation in unattended mode of other server products is similar.

To install in unattended mode

■ Navigate to the *UNIX_OS*/Server/Siebel_Enterprise_Server directory and enter:

`./setup`*UNIX_OS* `-args SS_SETUP_INI=`*main_installer_siebel.ini_path*

where:

■ *UNIX_OS* (for the directory path) = Your UNIX operating system, such as AIX, Solaris, or HPUX (for HP-UX).

■ *UNIX_OS* (for the command) = Your UNIX operating system, such as aix, solaris, or hp.

■ *main_installer_siebel.ini_path* = The full path, including the filename, to the main installer siebel.ini file.

For example, on Solaris:

`./setupsol -args SS_SETUP_INI=/export/home/Siebel_Install_Image/7.8.2.0/Solaris/Server/Siebel_Enterprise_Server/siebel.ini`

Editing siebel.ini Files for Unattended Configuration of Individual Servers

Follow this procedure for unattended configuration of individual modules such as Siebel Gateway Name Server or Siebel Server.

To modify the siebel.ini file for individual server configuration

1 Using a text editor, modify the appropriate siebel.ini file or files as listed below:

NOTE: Make a copy of each siebel.ini file you plan to modify, and save it in a unique location that identifies the module it pertains to. Preserve these copies in case you may need them for later reference.

■ **Siebel Gateway configuration.** *UNIX_OS*/Server/Siebel_Enterprise_Server/gtwysrvrcfg/ siebel.ini.

■ **Siebel Server configuration.** *UNIX_OS*/Server/Siebel_Enterprise_Server/siebsrvrcfg/ siebel.ini.

■ **Siebel Web Server Extension configuration.** *UNIX_OS*/Server/ Siebel_Web_Server_Extension/config/siebel.ini.

CAUTION: When you modify a siebel.ini file, make sure that you enter the correct values, because your entries are not validated by the installer.

2 Set all keys in the [Dialog.Config] section to no.

3 Locate [Behavior] section and set Silent to yes. This logs all errors instead of displaying them.

4 Set all values in [Defaults.Config] to the appropriate values.

The PrimaryLanguage and OMLanguages entries should be set to the three-letter language code (lowercase) for the desired language. For example, you should add PrimaryLanguage = enu for U.S. English. Language codes are listed at the end of the siebel.ini file. For more information about these parameters, see Table 14 on page 84.

NOTE: For configuration values, refer to "Sample Parameter Values for siebel.ini Files for Unattended Configuration" on page 82.

Sample Parameter Values for siebel.ini Files for Unattended Configuration

This section illustrates valid parameter values for siebel.ini files used for unattended configuration. Some settings, such as for ComponentGroups in Table 14 on page 84, require numeric input, mappings for which are also provided.

Sample for gtwysrvrcfg/siebel.ini

```
[Defaults.Config]
PrimaryLanguage = enu
GatewayPort = 2320
Autostart = Y
```

Table 13.   Siebel Gateway Component Keys

Component Key	Required?
PrimaryLanguage	Y
GatewayPort	Y
Autostart	Y

Sample for siebsrvrcfg/siebel.ini

```
[Defaults.Config]
; Enterprise Configuration
PrimaryLanguage = enu
OMLanguages = enu,fra
GatewayName = sdce420s049
GatewayPort = 2320
ComponentGroups = 1;13;18;20;21;23;24;26
ReviewEnterprise =
EnterpriseName = siebel
FileSystem = /vol1/bit/build/18104/fs
EnterpriseDescription = Siebel Enterprise
SynchMgrPort = 40400
DataMatching = 3
DatabaseType = 1
DatabaseNameConnectString = sdce420s049_inst11
TableOwner = ora002
Db2SqlId =
DatabaseUsername = sadmin
DatabasePassword = sadmin
ChartServer = smqalcn57
ChartImageFormat = 1
EncryptionType = 1


; Server Configuration
ServerName = sdce420s049
ServerDescription = Siebel Server
Db2Directory =
SynchMgrPortOverride = No
OverridePortNum =
SearchServer = 3
FulcrumDirectory =
RemoteSearchServerHostname =
RemoteSearchServerPortNumber =
Autostart = Y
StartServer = N


; SSL Configuration
DeploySSL = Y
SSLConfigType = 1
CertificateFileName = /export/home/cert.txt
CACertificateFileName = /export/home/cacert.txt
PrivateKeyFileName = /export/home/key.txt
PrivateKeyFilePassword =
PeerAuthentication = N
ValidatePeerCertificate = N
```

Table 14 on page 84 displays the Siebel Server component keys in the siebel.ini file. It also indicates whether the keys are always required and the conditions in which keys may be required. If a key is required, then there must be a corresponding value in the siebel.ini file.

Table 14.   Siebel Server Component Keys

Component Key	Required?	Condition When Required
PrimaryLanguage	Y	
GatewayPort	Y	
ComponentGroups	N	Never required. May be used only when installing the first Siebel Server for an Enterprise. Settings are inherited by other Siebel Servers. Component groups can be enabled or disabled after installation using Server Manager.
ReviewEnterprise	N	If installing an additional Siebel Server for an existing Enterprise.
EnterpriseName	Y	
FileSystem	Y	
EnterpriseDescription	N	
OMLanguages	N	If multiple Language Packs are installed. Separate multiple entries using commas, semicolons, or spaces. For example, you can specify ENU and FRA using a value like this: OMLanguages = enu, fra
Db2SqlId	N	If DB2 is selected.
SynchMgrPort	N	Default = 40400
DataMatching	Y	
DatabaseType	Y	
DatabaseNameConnectString	Y	
TableOwner	Y	
DatabaseUsername	Y	
DatabasePassword	Y	
ChartServer	N	
ChartImageFormat	Y	
EncryptionType	Y	
ServerName	Y	

Table 14.   Siebel Server Component Keys

Component Key	Required?	Condition When Required
ServerDescription	N	
Db2Directory	Y	
SynchMgrPortOverride	N	
OverridePortNum	N	SynchMgrPortOverride = Y
SearchServer	Y	
FulcrumDirectory	N	SearchServer = 1
RemoteSearchServerHostname	N	SearchServer = 2
RemoteSearchServerPortNumber	N	SearchServer = 2
Autostart	Y	
StartServer	Y	
DeploySSL	Y	
SSLConfigType	N	DeploySSL = Y. Possible values: 1 (enterprise configuration) or 2 (server configuration).
CertificateFileName	N	DeploySSL = Y
CACertificateFileName	N	DeploySSL = Y
PrivateKeyFileName	N	DeploySSL = Y
PrivateKeyFilePassword	N	
PeerAuthentication	N	DeploySSL = Y. Possible values: Y or N.
ValidatePeerCertificate	N	DeploySSL = Y. Possible values: Y or N.

Component Group Mapping

The following list provides the number corresponding to each Siebel Server component group within the siebel.ini file. An example for setting the ComponentGroups key was provided earlier.

```
1 = Assignment Management
2 = Communications Management
3 = Content Center
4 = Sales Credit Assignment
5 = Dun and Bradstreet
6 = Data Quality
7 = Siebel Dynamic Commerce
8 = Enterprise Application Integration
9 = Field Service
10 = Incentive Compensation
11 = Marketing Object Manager
12 = Marketing Server
13 = Siebel Remote
14 = Siebel Anywhere
```

```
15 = Siebel To Siebel Connector
16 = SAP Connector
17 = Oracle Connector
18 = Siebel Sales
19 = Sales Hierarchy Service
20 = Siebel eChannel
21 = Siebel Call Center
22 = Siebel Core Reference Application
23 = Siebel ISS
24 = Siebel Employee Relationship Management
25 = Siebel Wireless
26 = Workflow Management
27 = Handheld Synchronization
28 = Forecast Service Management
29 = PIM Server Integration Management
30 = Territory Management
31 = Siebel eAutomotive
32 = Siebel High Tech Industrial Manufacturing
33 = Siebel Life Sciences
34 = Siebel CME35 = Siebel Loyalty
36 = Siebel Loyalty Engine
37 = Siebel eHospitality
38 = Siebel Industry Marketing
39 = Siebel eConsumerSector
40 = Handheld Synchronization SIA
41 = Siebel Financial Services
42 = Siebel Public Sector
43 = Siebel Universal Customer Master
```

DataMatching Mapping

```
1 = Siebel Data Quality Matching
2 = Siebel Data Quality Connector
3 = None
```

DatabaseType Mapping

```
1 = Oracle Database 9i or 10g Enterprise Edition (CBO)
2 = IBM DB2 UDB for Windows and UNIX
3 = IBM DB2 UDB for z/OS
```

ChartImageFormat Mapping

```
1 = png
2 = gif
3 = jpg
```

EncryptionType Mapping

```
1 = NONE
2 = RSA
```

SearchServer Mapping

```
1 = Configure this server as a Search Server
2 = Configure this server to point to a Remote Search Server
3 = Skip
```

Sample for Siebel_Web_Server_Extension/config/siebel.ini

```
[Defaults.Config]
PrimaryLanguage = enu
WebServerDirectory = /usr/IBMIHS
SelectLoadBalancer = 1, 2 or 3
SingleServerHostname =
SingleServerPort =
ThirdpartyHostname =
ThirdpartyPort =
VirtualHostsFile =
CompressionType = 1
EncryptionType = 1
WebServerHttpPort = 80
WebServerHttpsPort = 443
WebUpdateKey = test
EmployeeUsername = sadmin
EmployeePassword = db2
ContactUsername = guestcst
ContactPassword = ldap
RestartWebServer = N
```

Table 15 on page 87 displays the Siebel Web Server Extension (SWSE) component keys in the siebel.ini file. It also indicates whether the keys are always required and the conditions in which keys may be required. If a key is required, then there must be a corresponding value in the siebel.ini file.

Table 15.   SWSE Component Keys

Component Key	Required?	Condition When Required
PrimaryLanguage	Y	
WebServerDirectory	Y	
CompressionType	Y	
EncryptionType	Y	
WebServerHttpPort	Y	
WebServerHttpsPort	Y	
WebUpdateKey	Y	
EmployeeUsername	Y	
EmployeePassword	Y	
ContactUsername	Y	

Table 15. SWSE Component Keys

Component Key	Required?	Condition When Required
SelectLoadBalancer	Y	
SingleServerHostname	N	If SelectLoadBalancer = 1
SingleServerPort	N	If SelectLoadBalancer = 1
ThirdpartyHostname	N	If SelectLoadBalancer = 2
ThirdpartyPort	N	If SelectLoadBalancer = 2
VirtualHostsFile	N	If SelectLoadBalancer = 3
ContactPassword	Y	
RestartWebServer	Y	

Load Balancing Configuration Mapping

    1 = Single Siebel Server in the Enterprise
    2 = Use a Third Party Load Balancer
    3 = Use the Built in Load Balancing Capability of the Siebel Web Server Extension

CompressionType Mapping

    1 = none
    2 = zlib

EncryptionType Mapping

    1 = none
    2 = RSA

Installing Siebel Reports Server in Unattended Mode

This section provides instructions for installing Reports Server in unattended mode.

For detailed information about modifying siebel.ini files, see "Editing siebel.ini Files for Unattended Installation" on page 78. (Do not modify settings in RunAfter sections.)

NOTE: For more information about installing Reports Server, see Chapter 12, "Installing the Siebel Reports Server." In particular, review the information presented in "Preinstallation Tasks for the Siebel Reports Server" on page 229.

Before starting the Reports Server installation, you must modify portions of the siebel.ini file, as described in the following section. After you are done with the installation, you can perform configuration in GUI mode as described later on in this chapter.

NOTE: After Siebel Reports Server is installed in the unattended mode, the Actuate iServer may fail to start. If you encounter such a problem, most likely the locale and time zone are incorrectly defined. When you install Siebel Reports Server in unattended mode, use values in the locale.txt and timezone.txt files to correctly set the Locale and TimeZone parameters in the siebel.ini file. For more information, see Table 16 on page 91.

To modify the siebel.ini file for the Siebel Reports main installer

1 Using a text editor, modify the siebel.ini file for the Siebel Reports Server.

    NOTE: Make a copy of each siebel.ini file you plan to modify, and save it in a unique location that identifies the module it pertains to. Preserve these copies in case you may need them for later reference.

    ■ **Siebel Reports Server.** *UNIX_OS*/Server/Siebel_Reports_Server/siebel.ini.

    where:

    ■ *UNIX_OS* = The UNIX platform, either AIX, Solaris, or HPUX (for HP-UX)

    CAUTION: When you modify a siebel.ini file, make sure that you enter the correct values, because your entries are not validated by the installer.

2 In the siebel.ini file, locate the [Dialog] section and set all keys to no, except the ones beginning with *Uninst*, to disable all prompts.

3 Locate the [Defaults.Unix] section and specify the installation location for RootDirectory, if you are installing in a location other than the default (\siebel_thirdparty).

4 Locate the [Defaults.ProductSelection] section, and set those products you want to install to yes.

5 Locate the [Dialog.ActuateServer.Unix] section.

    Using the following as an example, change the values to reflect your configuration requirements:

```
[Dialog.ActuateServer.Unix]
Readme = no
LocaleTimeZone = no
PMDHostPort = no
iServerHostPort = no
EncyclopediaVolume = no
AutoStart = no
AdminPassword = no
MgmtConsoleHTTPPort = no
```

6 Locate the [Defaults.ActuateServer.Unix] section.

    Using the following as an example, change the values to reflect your configuration requirements:

```
[Defaults.ActuateServer.Unix]
ActuateLicenseKey = license_key
Locale = 21
```

```
TimeZone = 19
PMDHost = machine_name
PMDPort = 8100
iServerHost = machine_name
iServerPort = 8000
EncyclopediaVolume = volume_name
AutoStart = Auto
AdminPassword =
MgmtConsoleHTTPPort = 8900
```

7 Locate the [Dialog.ActuatePortal.Unix] section.

Using the following as an example, change the values to reflect your configuration requirements:

```
[Dialog.ActuateActivePortal.Unix]
License = no
LocaleTimeZone = no
HTTPPort = no
EncyclopediaVolume = no
iServerHostPort = no
PMDHostPort = no
```

8 Locate the [Defaults.ActuateActivePortal.Unix] section.

Using the following as an example, change the values to reflect your configuration requirements:

```
[Defaults.ActuateActivePortal.Unix]
Locale = 21
TimeZone = 19
HTTPPort = 8700
EncyclopediaVolume = volume_name
iServerHost = machine_name
iServerPort = 8000
PMDHost = machine_name
PMDPort = 8100
```

If you are installing iServer in the same installation, the following parameters should have the same values as in [Defaults.ActuateServer.Unix]:

```
Locale
TimeZone
EncyclopediaVolume
iServerHost
iServerPort
PMDHost
```

Table 16 on page 91 displays the Reports Server component keys in the siebel.ini file. It also indicates whether the keys are always required and the conditions in which keys may be required. If a key is required, then there must be a corresponding value in the siebel.ini file.

Table 16.   Reports Server Component Keys

Component Key	Required?	Condition When Required
ActuateLicenseKey	Y	Specify the license key for your Siebel Reports products.
Locale	Y	Specify the numeric code for the locale you require. **NOTE:** For locale mappings, see the file locale.txt. This file is located in the directory Server/Siebel_Reports_Server, which is part of the Siebel image from which you installed the Siebel applications.
TimeZone	Y	Specify the numeric code for the time zone you require. **NOTE:** For time zone mappings, see the file timezone.txt. This file is located in the directory Server/Siebel_Reports_Server, which is part of the Siebel image from which you installed the Siebel applications.
PMDHost	Y	
PMDPort	Y	
iServerHost	Y	
iServerPort	Y	
EncyclopediaVolume	Y	
AutoStart	Y	If installing iServer and Management Console. Auto = automatic startup Manual = manual startup
AdminPassword	N	
MgmtConsoleHTTPPort	Y	If installing iServer and Management Console.
HTTPPort	Y	If installing ActivePortal.

Installing and Configuring in Console Mode

This section describes installing and configuring Siebel applications in console mode.

NOTE: The prompts for the console mode of installation and configuration are identical to those of the Java-based GUI, described in subsequent chapters. However, because console-mode installation and configuration does not provide GUI controls, such as a Browse button, you must substitute appropriate command-line responses instead of the displayed GUI responses, such as *Click Next*.

Process of Installing and Configuring in Console Mode

Console-mode installation and configuration requires the following tasks:

1 "Editing siebel.ini Files for Console Mode Installation" on page 92.

2 "Installing Siebel Applications in Console Mode" on page 92.

3 "Configuring Siebel Applications in Console Mode" on page 93.

NOTE: You can combine console mode and unattended mode installation. For details, see "Combining Console Mode and Unattended Mode Installation" on page 94.

Editing siebel.ini Files for Console Mode Installation

Before starting the installation, you must disable portions of the siebel.ini file.

After you finish the installation, launch the configuration in console mode from the configuration subdirectory (such as Siebel_Enterprise_Server/gtwysrvrcfg) and launch the installation and server configuration wizards separately.

To modify siebel.ini files for console mode installation

1 Using a text editor, modify the appropriate siebel.ini file or files as listed below:

   NOTE: Make a copy of each siebel.ini file you plan to modify, and save it in a unique location that identifies the module it pertains to. Preserve these copies in case you may need them for later reference.

   ■ **Siebel Enterprise Server.** *UNIX_OS*/Server/Siebel_Enterprise_Server/siebel.ini.

   ■ **Siebel Web Server Extension.** *UNIX_OS*/Server/Siebel_Web_Server_Extension/siebel.ini.

   CAUTION: When you modify a siebel.ini file, make sure that you enter the correct values, because your entries are not validated by the installer.

2 Locate the [RunAfter.Unix] section and change the values for the following parameters:

   ■ Siebel Enterprise Server

      ConfigGtwysrvr = no

      ConfigSiebsrvr = no

   ■ Siebel Web Server Extension

      Config.SWSE.Unix = no

Installing Siebel Applications in Console Mode

The following procedures describe the installation of the Siebel application in console mode.

To install in console mode

1 Open a new shell and navigate to the Siebel image location for the current software version. Then navigate to the directory where the main installer is located.

For example, for Solaris, navigate to *Siebel_Image*/Solaris/Server/Siebel_Enterprise_Server.

where:

■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as /Siebel_Install_Image/7.8.2.0.

2 Execute the following command:

```
./setupUNIX_OS -is:javaconsole -console -args
SS_SETUP_INI=main_installer_siebel.ini_path
```

where:

■ *UNIX_OS* = Your UNIX operating system, such as aix, hp, or sol.

■ *main_installer_siebel.ini_path* = The full path, including the filename, to the main installer siebel.ini file that you edited using the procedures in "Editing siebel.ini Files for Console Mode Installation" on page 92.

NOTE: There should be no spaces before and after the equals sign in the command.

For example, for AIX, you might enter:

```
./setupaix -is:javaconsole -console -args SS_SETUP_INI=/export/home/
Siebel_Install_Image/7.8.2.0/AIX/Server/Siebel_Enterprise_Server/siebel.ini
```

Optionally, you can append additional flags to your command. For more information, see "Additional Flags for Installation Commands" on page 95.

The console mode installation script appears. For more information about specific prompts, see the module-specific installation chapters later in this guide.

3 Launch the configuration in console mode or GUI mode.

■ To launch it in console mode, see "Configuring Siebel Applications in Console Mode" on page 93.

■ To launch it in GUI mode, see subsequent chapters in this guide.

Configuring Siebel Applications in Console Mode

After installation, you must start the Siebel Software Configuration Wizard.

To run the configuration wizard in console mode

1 Launch the configuration wizard in console mode from the *UNIX_OS*/Server/ Siebel_Enterprise_Server/*language* subdirectory in the Siebel image.

■ **Siebel Gateway Name Server.** *UNIX_OS*/Server/Siebel_Enterprise_Server/gtwysrvrcfg

■ **Siebel Server.** *UNIX_OS*/Server/Siebel_Enterprise_Server/siebsrvrcfg

■ **Siebel Web Server Extension.** *UNIX_OS*/Server/Siebel_Web_Server_Extension/config

where:

■ *UNIX_OS* = Your UNIX operating system, such as AIX, Solaris, or HPUX (for HP-UX)

2 Enter the following command on a single input line:

`./setup`*UNIX_OS* `-is:javaconsole -console -args StringTable=`*SIEBEL_ROOT*`/_uninst/`*product_directory*`/table.txt`

where:

■ *UNIX_OS* = Your UNIX operating system, such as aix, hp, or sol

■ *product_directory* = The subdirectory where the product is installed, such as ses (for Siebel Enterprise Server), eappweb (for Siebel Web Server Extension), and so on

NOTE: There should be no spaces before and after the equals sign in the command.

Combining Console Mode and Unattended Mode Installation

If you want to run the installation and configuration together and not have to turn off the configuration settings in the siebel.ini file, you can combine console mode and unattended mode installation as described in the following procedure.

NOTE: This topic discusses Siebel Gateway Name Server and Siebel Server. Similar configuration can also be done for Siebel Web Server Extension.

To combine console and unattended installation

1 Provide default values in gtwysrvrcfg/siebel.ini and siebsrvrcfg/siebel.ini, as described under "Sample Parameter Values for siebel.ini Files for Unattended Configuration" on page 82.

2 Modify the [ConfigGtwysrvr] and [ConfigSiebsrvr] sections of the main siebel.ini file for the Siebel Enterprise Server installer, as follows:

```
[ConfigGtwysrvr]

Condition = $(GatewaySelected)=yes,$(Patch)=no
Execute = $(JavaHome)/bin/java
Arg = -cp $(CDPath)/gtwysrvrcfg/setup.jar run -console -args SS_SETUP_INI=Full path
to your modified gtwysrvrcfg configuration ini file, including the filename
StringTable = $(UninstallPath)/table.txt
```

```
[ConfigSiebsrvr]

Condition = $(SiebelSelected)=yes,$(Patch)=no
Execute = $(JavaHome)/bin/java
Arg = -cp $(CDPath)/siebsrvrcfg/setup.jar run -console -args SS_SETUP_INI=Full path
to your modified siebsrvrcfg configuration ini file, including the filename
StringTable = $(UninstallPath)/table.txt
```

CAUTION: Do not modify the table.txt file.

3 Execute the following command:

```
./setupUNIX_OS -is:javaconsole -console -args
SS_SETUP_INI=main_installer_siebel.ini_path
```

where:

- ■ *UNIX_OS* = Your UNIX operating system, such as aix, hp, or sol.

- ■ *main_installer_siebel.ini_path* = The full path, including the filename, to the main installer
  siebel.ini file that you edited using the procedures in "Editing siebel.ini Files for Console Mode
  Installation" on page 92.

Additional Flags for Installation Commands

You can optionally append any of the following flags to your installation command:

- ■ -is:log *logfile*

  where:

  - ■ *logfile* = The full path name and the name of the file to be generated (for example, /usr/
    tmp/gateway.log)

  Generates an additional log file. The logging information in the file is limited to initialization
  errors, such as JVM. Use this flag for debugging or for troubleshooting when you cannot invoke
  the installation process.

  NOTE: The default log file that records status errors during installation is created in the
  $*SIEBEL_ROOT* directory.

- ■ -is:javaconsole -console

  Generates a script-type (non-GUI) installation. This method is most useful when installing over
  a WAN. For more information, see "Installing and Configuring in Console Mode" on page 91.

- ■ -is:tempdir *temp_directory_location*

  Directs the installer to the location to install the temporary files. If the default directory is not
  suitable or does not have the required free space, you can designate another location. For more
  information, see "Managing Temporary Disk Space Required by Installers" on page 24.

6 Installing the Siebel Gateway Name Server

This chapter explains how to install and configure the Siebel Gateway Name Server, using the GUI installation method. It includes the following topics:

- *"Process of Installing the Siebel Gateway Name Server"* on page 97
- *"Siebel Gateway Name Server Installation Requirements"* on page 98
- *"Installing and Configuring the Siebel Gateway Name Server"* on page 99
- *"Postinstallation Tasks for Siebel Gateway Name Server"* on page 103
- *"Reviewing the Installation for Siebel Gateway Name Server"* on page 103
- *"Verifying the Siebel Gateway Name Server Has Started"* on page 106
- *"Configuring the Siebel Gateway Name Server for Automatic Start"* on page 106
- *"Troubleshooting Siebel Gateway Name Server Installation"* on page 109

For alternative installation methods, refer to Chapter 5, *"Installing in Unattended and Console Modes."*

For more information on the role of the Siebel Gateway Name Server within the Siebel environment, see the *Deployment Planning Guide*.

Process of Installing the Siebel Gateway Name Server

The Siebel Gateway Name Server installation process requires multiple tasks that you should perform in the following sequence:

1 Verify Siebel Gateway Name Server installation requirements. For more information, see *"Siebel Gateway Name Server Installation Requirements"* on page 98.

2 (Strongly recommended) Configure clustering for the server on which you will install Siebel Gateway Name Server. For more information, see the *Deployment Planning Guide*.

3 Install and configure the Siebel Gateway Name Server. For more information, see *"Installing and Configuring the Siebel Gateway Name Server"* on page 99.

4 Review the installation. See *"Reviewing the Installation for Siebel Gateway Name Server"* on page 103.

5 Verify that the Siebel Gateway Name Server is up and running. For more information, see *"Verifying the Siebel Gateway Name Server Has Started"* on page 106.

6 (Optional) Configure the Siebel Gateway Name Server to start automatically. For more information, see *"Configuring the Siebel Gateway Name Server for Automatic Start"* on page 106.

Siebel Gateway Name Server Installation Requirements

Review the following guidelines before installing the Siebel Gateway Name Server.

CAUTION: Do not install Siebel Business Applications without first reviewing *System Requirements and Supported Platforms* on Siebel SupportWeb.

■ If the machine on which you are installing the Siebel Gateway Name Server will also support a Siebel Server, you must have all the required third-party products installed for that component, as listed in *System Requirements and Supported Platforms* on Siebel SupportWeb.

   NOTE: The Siebel Gateway Name Server and Siebel Server are both installed into a common root, $*SIEBEL_ROOT*.

■ If you will be clustering the Gateway Name Server, plan your use of clustering or redundant disk arrays (RAID) to configure against a single point of failure. For more information on this topic, see the *Deployment Planning Guide*.

■ Each machine that supports a Siebel Server must have TCP/IP network connectivity to the machine on which the Siebel Gateway Name Server will be installed. Verify network connectivity between all such machines, using the `ping` utility.

■ Verify that the network names of the servers that will support the Siebel Gateway Name Server and all Siebel Servers are recorded in Appendix A, "Deployment Planning Worksheet." You will need this information later when installing the Siebel Servers and Siebel clients.

■ Verify that the network adapter is correctly configured to support full duplex Ethernet by verifying the following parameters:

   ■ RJ45 Port Link Status: up

   ■ Media Speed Selected: 100 Mbps Full Duplex

   ■ Media Speed Running: 100 Mbps Full Duplex

   NOTE: Gigabit Ethernet cards must be set to `Auto Configure`.

■ Install the Siebel Gateway Name Server only once for each Siebel Enterprise Server. If needed, multiple Siebel Enterprises can be supported by a single Siebel Gateway Name Server. It is recommended that you only install one Siebel Gateway Name Server on a machine. If you want to install more than one Siebel Gateway Name Server on a single machine, you must install each on a different port.

■ Siebel Gateway Name Server uses port 2320 by default. If necessary, you can select any port number (lower than 32767) that is free on the machine where the Siebel Gateway Name Server is running. Do not use port number 2321, which is the default port number for the SCBroker (Siebel Connection Broker) component. To confirm that a port (such as 2320) is free, use a command like `netstat -a | grep 2320`.

■ Review the issues described in "Managing Temporary Disk Space Required by Installers" on page 24. For example, make sure you have adequate disk space, and make sure the login ID running the installer has write permissions to this directory.

■ Verify that you have created a Siebel installation image that includes all products you require, and that you have appropriate permissions to the network directories where the Siebel image is located. For information about creating the Siebel installation image, see Chapter 4, "Creating the Siebel Installation Image on the Network."

■ You cannot install additional products into a root directory after applying a patch. You can install additional languages into a root directory after applying a patch, but you must reapply the patch afterwards.

■ If the set-group-id flag is used, make sure that the installer ID is a member of the group that owns the parent directory (*SIEBEL_ROOT*).

■ **Solaris only**

   ■ Set the TCP ndd variable `tcp_co_min` to the MTU of the NIC. For more details, see http:// sunsolve.sun.com.

■ **AIX only**

   ■ Verify that the login ID performing installation has permission to run `slibclean` by asking the administrator to change the permission as follows:

   `chmod 6555 /usr/sbin/slibclean`

■ **HP-UX only**

   ■ If the environmental variable LANG is set to a directory name that is a symbolic link, the Java installer for Siebel Server will fail. You must reset any existing LANG variable to the actual directory that the symbolic link represents.

   NOTE: The LANG variable cannot be set to `univ.utf8`. This causes the installer to fail.

Installing and Configuring the Siebel Gateway Name Server

This section provides instructions for installing and starting the Siebel Gateway Name Server as part of standard Siebel Enterprise Server deployment.

In most cases, the installation should be conducted by a nonroot user for simpler administration and maintenance.

NOTE: Whether you install as root or as a nonroot user affects how you would configure autostart for Siebel Gateway Name Server, as described in "Configuring the Siebel Gateway Name Server for Automatic Start" on page 106.

NOTE: If you are installing from a remote machine, or using X-connectivity software to access a UNIX machine from a Windows machine, see also "Installing from a Remote Server Machine" on page 29.

The Siebel Enterprise Server installer verifies not only that you have the required software for installation of Siebel version you are installing, but that the software is at the version level necessary.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install the Siebel Gateway Name Server

1 Log on to the server, using the Siebel service owner account that you recorded in the copy you made earlier of the worksheet in Appendix A, "Deployment Planning Worksheet."

   NOTE: If the Siebel Gateway Name Server is installed by root, then only root can stop and start the server. Use a Siebel account other than root that has the correct authorizations to install. For more information on creating Siebel accounts, see "Creating the Siebel Service Owner Account" on page 34.

2 Open a new shell and navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

   For example, for Solaris, navigate to *Siebel_Image*/Solaris/Server/Siebel_Enterprise_Server.

   where:

   ■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as /Siebel_Install_Image/7.8.2.0.

3 Unset any Siebel-specific environment variables. To view current environment variable settings, enter env in the shell window.

4 To start the Siebel Gateway Name Server installation process, enter the following command. Optionally, append any flags described in "Additional Flags for Installation Commands" on page 95.

   ./setup*UNIX_OS*

   where:

   ■ *UNIX_OS* = Your UNIX operating system, such as sol, hp, or aix

   The Installer Welcome screen appears.

5 Click Next.

   If you have installed other Siebel components of the same version on the same machine, the installer displays the message that an existing installation has been found. In such a case, proceed to Step 6 on page 100. Otherwise, click Next and proceed to Step 7 on page 101.

6 Depending on whether you want to install a new instance of Siebel software or add a new language to an existing instance, take the appropriate action.

   ■ To install the Siebel Enterprise Server software in a new instance, select None as the default and click Next. Proceed to Step 7 on page 101.

■ To install a new language in an existing instance, select the displayed instance and click Next. Proceed to Step 11 on page 102.

For additional information about installing multiple Language Packs, see "Siebel Server Installation Requirements" on page 112.

The Installer Path screen appears.

7 Enter the fully qualified path to the installation directory that you recorded in a copy of the worksheet in Appendix A, "Deployment Planning Worksheet," or click Browse to choose a different directory.

NOTE: The directory name should be standard alphanumeric characters, including the underscore. No other characters or spaces are allowed.

8 Click Next.

The Installer Product Selection screen appears.

9 Select the Gateway Name Server and click Next.

Other Siebel Enterprise Server (SES) components can be installed later. Alternatively, if you choose to install additional components at the same time as the Siebel Gateway Name Server, it is not necessary to enter some of the same information, such as language choice, twice. In this case, the installation steps described in Chapter 7, "Installing the Siebel Server," will not appear in the exact order as described.

If you install more than one component at once, the Siebel Enterprise Server installer and the Siebel Software Configuration Wizard prompt you for the installation parameters of each component individually and in the sequence required.

For more information about different ways of deploying Siebel Enterprise Server components, see the *Deployment Planning Guide*.

NOTE: Before proceeding, review the preinstallation requirements for each component you plan to install and perform any necessary preinstallation tasks. See "Siebel Gateway Name Server Installation Requirements" on page 98 and other applicable sections.

10 Choose the type of installation to perform from the following options; then click Next to continue.

NOTE: For the Siebel Gateway Name Server, all three options install the same components.

■ **Typical.** Installs all Siebel Gateway components.

■ **Compact.** Installs only those components necessary to run the Siebel Gateway, but no additional components or help.

■ **Custom.** Lets you customize your installation by choosing the specific components you want to install.

The Install Selected Language Packs screen appears.

11 Choose the language or languages to be installed and click Next.

Servers are installed, at a minimum, with the primary (base) language in which each server will run. This is the primary (base) language for your Enterprise Server. Optionally, you can install one or more additional languages.

When installing languages at a later date, you must also reinstall any patch releases that were previously installed.

NOTE: Before you install Language Packs, see the information about code pages in "Planning RDBMS Installation and Configuration" on page 22, and see "Siebel Gateway Name Server Installation Requirements" on page 98.

The installer displays the location into which it will install the Siebel Gateway Name Server and any other servers you have elected to install, and also the disk space required for the software you are installing.

12 Click Next to copy the files for the selected products into the installation location. Alternatively, to change any settings, click Back, adjust your selections, and click Next to return to this screen.

The installer proceeds to install the specified files.

A message appears, stating that language files are being installed.

The Installer Progress screen appears and displays the progress of the installation followed by additional configuration screens.

Which screen appears next depends on whether you are installing one or multiple languages.

■ If you are installing more than one language, the Primary Language screen appears. Proceed to Step 13 on page 102.

■ If you are installing only one language, the Gateway Port screen appears. Proceed to Step 14 on page 102.

13 Select the primary (base) language and click Next.

NOTE: This is the primary (base) language for your Siebel Enterprise—the language in which you want your Siebel Server to run and in which you normally want to read messages.

The Port Number screen appears.

14 Accept the default Gateway Port Number or change it and click Next.

For more information about port numbers and Siebel Gateway Name Server, see "Siebel Gateway Name Server Installation Requirements" on page 98.

The Installer Autostart screen appears.

15 Choose whether the Siebel Gateway Name Server should autostart on restart, or not, and then click Next.

If you will be clustering this Siebel Gateway Name Server, do not configure it for automatic start; otherwise, select automatic start. The automatic start setting programs the Siebel Gateway Name Server to accept additional configuration instructions to start automatically each time the host machine restarts. To actually implement automatic start-up, you must also complete the configuration steps described in "Configuring the Siebel Gateway Name Server for Automatic Start" on page 106.

The Installer Configuration Verification screen appears.

16 Verify the Siebel Gateway Name Server settings and click Next to accept, or Back to go back and change a setting.

NOTE: Your installation process may vary from the procedure provided in this section, depending on what components you have selected to install. For example, you may have elected to install the Siebel Gateway Name Server and the Siebel Server at the same time. In this instance, the installer will skip from this point in the Siebel Gateway Name Server installation to Step 2 on page 117 (in Chapter 7, "Installing the Siebel Server").

The Finish screen appears.

17 To complete the installation, click Finish.

To verify the installation

1 Navigate to $SIEBEL_ROOT/gtwysrvr/bin.

2 Using an editor like vi, open the base.txt file. It lists the type of installation just completed, for example:

    7.8.2 [19213]

Postinstallation Tasks for Siebel Gateway Name Server

Perform the following tasks after running the Siebel Gateway Name Server installation program:

■ "Reviewing the Installation for Siebel Gateway Name Server" on page 103

■ "Verifying the Siebel Gateway Name Server Has Started" on page 106

■ (Optional) "Configuring the Siebel Gateway Name Server for Automatic Start" on page 106

Reviewing the Installation for Siebel Gateway Name Server

After the installation and configuration has concluded, the following Siebel Gateway Name Server files should now exist under the $SIEBEL_ROOT directory you specified during the installation.

```
_uninst/

    ses/
    uninstall.ksh

gtwysrvr/

    admin/
    base.txt
    bin/
    dbtempl/
    enu.txt
    input/
    install_script/
    lib/
    locale/
    log/
    objects/
    output/
    siebenv.csh
    siebenv.sh
    sqltempl/
    sys/
    temp/
    upgrade/
    upgrade.log
```

_uninst. The files required to uninstall the program. It contains uninstall information for all products installed into the top-level directory ($*SIEBEL_ROOT*).

       ses. Contains files required to uninstall the product.

       uninstall.ksh. Uninstallation script for UNIX.

gtwysrvr. Top-level directory for Siebel Gateway Name Server.

admin. The template files used for scripts that control the running and configuration of the Siebel Gateway Name Server.

bin. Siebel Gateway Name Server start script, stop script, and executable programs.

dbtempl. Dictionary and local database files required by Siebel Remote for regional users and mobile Web users.

input. Contains files related to Siebel Remote.

install_script. Contains files used by the UNIX installer.

lib. Siebel Gateway Name Server program library files.

locale. Language-specific files and scripts. These are not configurable.

log. Siebel Gateway Name Server logs.

objects. Empty directory. When you install the Siebel Server into the same root directory, that installation procedure populates this directory with a *language* subdirectory (such as enu for U.S. English) with a corresponding Siebel repository file (siebel.srf).

output. Contains files related to Siebel Remote.

siebenv.csh. C shell variant of the Siebel script for setting environment variables on the server.

siebenv.sh. Bourne shell and Korn shell variant of the Siebel script for setting environment variables on the server.

sqltemp. Empty directory. When you install the Siebel Server into the same root directory, that installation procedure populates this directory with SQL files, containing SQL templates that can be used to create SQL statements the Siebel Server will use to perform specific database operations.

sys. The backing files and Service entry files used by the Siebel Gateway Name Server and server control utilities. Do not edit or modify these files unless instructed to do so by Siebel Technical Support.

temp. Stores temporary files generated by the Siebel Gateway Name Server.

upgrade. Files and scripts related to version upgrades of Siebel Business Applications. Also holds temporary, backup, and state log files used during an upgrade.

upgrade.log. Upgrade log file.

Verifying the Siebel Gateway Name Server Has Started

If, during configuration, you selected manual start for the Siebel Gateway Name Server, you must make sure that the Siebel Gateway Name Server is started every time you:

■ Install and configure a new Siebel Server component.

■ Operate a Siebel Business application.

To verify that the Siebel Gateway Name Server has started

■ Navigate to the $SIEBEL_ROOT/gtwysrvr directory and source the Siebel environmental variables. Choose the appropriate command for your UNIX shell or its variant.

Bourne or Korn shell

. ./siebenv.sh

TIP: Make sure there is a space between the initial period and ./siebenv.sh.

C shell

source siebenv.csh

This sets the Siebel environment variables and path information required to use Siebel utilities.

TIP: To configure the Siebel environment shell script to source automatically whenever a Siebel administrator logs on, specify the shell as the default for administrator accounts. Then, add this command to the start-up file for the administrator's account.

To verify that the Siebel Gateway Name Server is running

■ Enter list_ns

You should receive a response similar to this:

started at Fri Mar 19 15:33:26 2004, pid: 4024, autostart: yes

If the Siebel Gateway Name Server is stopped, do the following:

■ Execute the start_ns command to start the Siebel Gateway Name Server. For details, see the *Siebel System Administration Guide*.

■ Execute list_ns to verify that it is operating correctly.

Configuring the Siebel Gateway Name Server for Automatic Start

If, during installation, you elected automatic restart of the Siebel Gateway Name Server, you need to complete the procedure that follows to enable it.

NOTE: The process should be run as the user who installed the Siebel Gateway Name Server.

After making the changes described in this section, the Siebel Gateway Name Server will start
automatically when you restart your server and stop automatically when you shut down. After
making these changes, you can proceed with installing Siebel Server.

NOTE: Remember that the Siebel Gateway Name Server must be the first service to start up, and
the last to be shut down, among all the servers in the Siebel Enterprise served by that Siebel
Gateway Name Server.

To configure the Siebel Gateway Name Server for autostart on HP-UX

1 Log on as root to the machine on which the Siebel Gateway Name Server was installed.

2 Copy the file siebel_server to the /sbin/init.d directory, as follows:

```
cp $SIEBEL_ROOT/bin/siebel_server /sbin/init.d
```

where:

- ■ $SIEBEL_ROOT = The full path to the Siebel root directory

3 If you have not already done so, using any text editor, edit /sbin/init.d/siebel_server and replace
$SIEBEL_GATEWAY_ROOT with the actual path to the Siebel Gateway Name Server installation
directory.

4 Set the appropriate permissions by executing the following command:

```
chmod 755 /sbin/init.d/siebel_server
```

5 Create a soft link to /sbin/rc3.d/S720siebel_server from /sbin/init.d/siebel_server by executing
the following command:

```
ln -s /sbin/init.d/siebel_server /sbin/rc3.d/S720siebel_server
```

6 Create a soft link to /sbin/rc2.d/K320siebel_server from /sbin/init.d/siebel_server by executing
the following command:

```
ln -s /sbin/init.d/siebel_server /sbin/rc2.d/K320siebel_server
```

If Siebel Gateway Name Server was installed as a nonroot user, continue with .
Otherwise, you have completed this process.

7 Create or edit /sbin/init.d/siebel_server_nonroot to add the following line:

```
/usr/bin/su - SIEBEL_ACCOUNT -c "/sbin/init.d/siebel_server $1"
```

where:

- ■ SIEBEL_ACCOUNT = The user account installing the Siebel products

8 Remove /sbin/rc3.d/S720siebel_server and /sbin/rc2.d/K320siebel_server, if they already exist.

9 Execute the following commands:

```
chmod 755 /sbin/init.d/siebel_server_nonroot

ln -s /sbin/init.d/siebel_server_nonroot /sbin/rc3.d/S720siebel_server

ln -s /sbin/init.d/siebel_server_nonroot /sbin/rc2.d/K320siebel_server
```

To configure the Siebel Gateway Name Server for autostart on Solaris

1 Log on as root to the machine on which the Siebel Gateway Name Server was installed.

2 Copy the file siebel_server to the /etc/init.d directory, as follows:

cp $*SIEBEL_HOME*/bin/siebel_server /etc/init.d

where:

■ $*SIEBEL_HOME* = The full path to the Siebel root directory

3 Using any text editor, edit /etc/init.d/siebel_server so that $*SIEBEL_GATEWAY_ROOT* is pointing to the actual path to the Siebel Gateway Name Server installation directory.

4 Set the appropriate permissions by executing the following command:

chmod 755 /etc/init.d/siebel_server

5 Create a soft link to /etc/rc3.d/S72siebel_server from /etc/init.d/siebel_server by executing the following command.

ln -s /etc/init.d/siebel_server /etc/rc3.d/S72siebel_server

6 Create a soft link to /etc/rc2.d/K32siebel_server from /etc/init.d/siebel_server by executing the following command:

ln -s /etc/init.d/siebel_server /etc/rc2.d/K32siebel_server

If Siebel Gateway Name Server was installed as a nonroot user, continue with . Otherwise, you have completed this process.

7 Create or edit /etc/init.d/siebel_server_nonroot to add the following line:

/usr/bin/su - *SIEBEL_ACCOUNT* -c "/etc/init.d/siebel_server $1"

where:

■ *SIEBEL_ACCOUNT* = The user account installing the Siebel products

8 Remove /etc/rc3.d/S72siebel_server and /etc/rc2.d/K32siebel_server, if they already exist.

9 Execute the following commands:

chmod 755 /etc/init.d/siebel_server_nonroot

ln -s /etc/init.d/siebel_server_nonroot /etc/rc3.d/S72siebel_server

ln -s /etc/init.d/siebel_server_nonroot /etc/rc2.d/K32siebel_server

To configure the Siebel Gateway Name Server for autostart on AIX

1 Log on as root to the machine on which the Siebel Gateway Name Server was installed.

2 Execute the following command on a single line:

```
mkitab "sieb_gtwyns:2:wait:su - SIEBEL_ACCOUNT -c \"$SIEBEL_HOME/bin/
siebel_server start\""
```

where:

- ■ *SIEBEL_ACCOUNT* = The user account installing the Siebel products
- ■ $*SIEBEL_HOME* = The installation directory for the Siebel Gateway Name Server

3 Verify if the file /etc/rc.shutdown exists. If it does not exist, create it and change the permissions:

```
touch /etc/rc.shutdown
```

```
chmod 744 /etc/rc.shutdown
```

4 Edit the file /etc/rc.shutdown by adding the following command:

```
/usr/bin/su - SIEBEL_ACCOUNT -c "$SIEBEL_HOME/bin/siebel_server stop"
```

where:

- ■ *SIEBEL_ACCOUNT* = The user account installing the Siebel products
- ■ $*SIEBEL_HOME* = The installation directory for the Siebel Gateway Name Server

5 Save and close the file.

Troubleshooting Siebel Gateway Name Server Installation

This section describes potential errors that can result from a faulty installation or configuration.

Problem: The Siebel Gateway Name Server does not start.

Solution: Failure to start the Siebel Gateway Name Server can be caused by a number of problems including, but not limited to, incorrectly set LD_LIBRARY_PATH (Solaris), SHLIB_PATH (HP-UX), or LIBPATH (AIX) variables, incorrect permissions set on shared libraries, or missing shared libraries.

You can use the ldd command to show missing libraries. Also check the siebenv.csh and siebenv.sh files and make sure that $*SIEBEL_HOME*/lib is included and set before LD_LIBRARY_PATH (Solaris), SHLIB_PATH (HP-UX), or LIBPATH (AIX). If there are library conflicts, set $*SIEBEL_HOME*/lib as the first element of the shared library path environment variable.

7 **Installing the Siebel Server**

This chapter describes the tasks for installing and configuring the Siebel Server, using the GUI installation method. It includes the following topics:

- "Process of Installing the Siebel Server" on page 111
- "Siebel Server Installation Requirements" on page 112
- "Configuring Database Connectivity" on page 115
- "Verifying Network Connectivity for the Siebel Server Machine" on page 116
- "Installing and Configuring the Siebel Server" on page 117
- "Postinstallation Tasks for Siebel Server" on page 124
- "Reviewing the Installation for Siebel Server" on page 124
- "Verifying the ODBC Data Source for DB2 UDB" on page 126
- "Verifying the ODBC Data Source for Oracle" on page 127
- "Establishing Network Connectivity for Mobile Users" on page 128
- "Preparing to Run Siebel Server Components After Installing" on page 129
- "Disabling Language-Specific Application Object Managers" on page 129
- "Managing Load Balancing for Siebel Applications" on page 130
- "Installing Additional Siebel Servers for an Existing Siebel Enterprise Server" on page 134
- "Configuring the Siebel Server for Automatic Start on AIX" on page 137
- "Configuring the Siebel Server for Automatic Start on HP-UX and Solaris" on page 138
- "Managing Environment Variables" on page 141
- "Troubleshooting Siebel Server Installation" on page 143
- "Troubleshooting the ODBC Data Source Connection" on page 143

For alternative installation methods, refer to Chapter 5, "Installing in Unattended and Console Modes."

Process of Installing the Siebel Server

The Siebel Server installation and configuration process requires multiple tasks that you should perform in the following sequence:

1 Review deployment requirements. See "Siebel Server Installation Requirements" on page 112.

2 Verify connectivity to the Siebel Database. See "Configuring Database Connectivity" on page 115.

3 Verify Siebel Server network access. See "Verifying Network Connectivity for the Siebel Server Machine" on page 116.

4 Install and configure the Siebel Server. See "Installing and Configuring the Siebel Server" on page 117.

5 Perform postinstallation tasks. See "Postinstallation Tasks for Siebel Server" on page 124.

Siebel Server Installation Requirements

Review the following requirements for Siebel Server installation:

CAUTION: Do not install Siebel Business Applications without first reviewing *System Requirements and Supported Platforms* on Siebel SupportWeb.

■ A Siebel Gateway Name Server must be installed and running to configure a Siebel Server.

■ When you install the first Siebel Server in your deployment, you automatically configure the Siebel Enterprise Server. All subsequent Siebel Servers installed in this Siebel Enterprise Server must connect to the same database.

■ Be sure that all machines on which the Siebel Server will be installed meet the hardware and software requirements detailed in *System Requirements and Supported Platforms* on Siebel SupportWeb. The Siebel Enterprise Server installer verifies not only that you have the required software for installation of Siebel 7.x, but that the software is the necessary version level.

■ Every Siebel Server supported by a given Siebel Database must belong to the same Siebel Enterprise Server, regardless of the platform on which the Siebel Servers are operating. When you install the first Siebel Server within a Siebel Enterprise Server, you will be automatically prompted to configure the Siebel Enterprise Server. Additional Siebel Servers installed in that Siebel Enterprise Server automatically inherit its parameters.

■ The Siebel Server software needs to be installed only once on each machine. However, you may configure as many Siebel Servers as you want to operate from that single software installation by using the config_server script. See "Installing Additional Siebel Servers for an Existing Siebel Enterprise Server" on page 134.

■ When you choose which component groups to enable on the first Siebel Server in an Enterprise, subsequent Siebel Servers inherit the same ones. For this reason, it is recommended that you enable for your environment all component groups for which you have a license. If you do not enable component groups during initial installation and configuration of the software, you can enable them manually after installation, using Server Manager.

For each additional Siebel Server you install subsequently, you can manually disable any unneeded component group after installation, using Server Manager.

For more information about component groups and about using Server Manager, see the *Siebel System Administration Guide*.

■ Depending on the requirements of your business, you may deploy one or more Siebel Enterprise Servers. If you intend to configure multiple Siebel Enterprise Servers on a single machine in your development or test environment, you should issue a command similar to unsetenv SIEBEL_ROOT to specify a unique value for each Siebel Enterprise Server. (SIEBEL_ROOT is the environment variable for the installation root directory.) The command unsetenv is a C shell command; use the appropriate command for your shell. For information on deploying multiple Siebel Enterprise Servers, see the *Deployment Planning Guide*.

■ Verify that you have created a Siebel installation image that includes all products you require, and that you have appropriate permissions to the network directories where the Siebel image is located. For information about creating the Siebel installation image, see Chapter 4, "Creating the Siebel Installation Image on the Network."

■ (AIX only) Before you install a Siebel Server on AIX, you must install X11 filesets, if they were not included as part of the base AIX installation.

Clustering Requirements for the Siebel Server

The Siebel installer allows you to install all servers at once for which you have a license. If you will be operating certain servers as part of a cluster, you must install and configure the Siebel Gateway Name Server and the Siebel Server on separate resource groups. For information about clustering, see the *Deployment Planning Guide*.

Language and Locale Requirements

Make sure you have the appropriate locales on the machines on which you intend to deploy Siebel Server. Siebel log and configuration files use UTF-8 with Byte Order Mark as the default encoding. If these files contain any non-ASCII characters, proper viewing and editing requires a UTF-8 locale. For more information on supported locales, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

The language locale can affect how time is displayed. For more information, see the *Global Deployment Guide*.

NOTE: Make sure the locale you are using matches the locale set at your operating system level. For details, see "Specifying the Locale for Your UNIX Operating System" on page 27.

Guidelines for Installing Multiple Language Packs on the Siebel Server

If you will be installing multiple language versions of Siebel Business Applications on your Siebel Servers, review the following configuration guidelines:

■ You run the Siebel Software Configuration Wizard only once for each Siebel Server. Do not use this wizard to reconfigure an existing server.

■ When you run the Configuration Wizard, Application Object Managers (AOMs) are created for every language that has been installed on that Siebel Server.

Because the AOMs are created from a file (omdefs.dat or omdefs_sia.dat) installed as part of the Siebel Language Packs, they are created only for languages for which a Language Pack has been installed. (The file omdefs_sia.dat is used for Siebel Industry Applications.) However, you can manually create AOMs for languages that have not been installed. To do this, use Server Manager in GUI or command-line mode, or create and import a modified omdefs.dat or omdefs_sia.dat file. For information about importing such a file, see the *Global Deployment Guide*.

■ When new AOM components are created, they are automatically assigned to every server and they attempt to run on every server with the parent component group assigned and enabled. For information about server component groups and their member components, see the *Siebel System Administration Guide*. See also "Preparing to Run Siebel Server Components After Installing" on page 129.

■ When you add a new server, it will inherit every component group and every AOM by default.

■ If multiple languages are installed, you will be prompted for the primary (base) language. This is the primary (base) language for your Enterprise Server—the language in which you want your Siebel Server to run and in which you normally want to read messages. If you want to change the language in which you bring up your server, you must change this language.

■ For multilingual deployment scenarios, see also the *Global Deployment Guide*.

Adding a New Product to an Existing Installation

When you add a new product to an existing installation, it is vital that you install the same set of languages for the new product. For example, do this when adding a Siebel Server to the same directory in which you have installed a Siebel Gateway Name Server.

All Siebel Enterprise components must be at the same release and patch level.

Because both products share the same root directory, they are treated by the installer as one product in terms of patches and the addition of new languages.

After an installation directory is patched, a new product cannot be added to that directory. In that case, install the product in a new installation directory.

Siebel Search

A Siebel Server can be configured to execute searching or can be pointed to another remote Siebel Search server to handle search execution tasks. If you want a server to function as a Siebel Search server, you must install the Siebel Search server (Hummingbird SearchServer) before installing Siebel Server on that machine. For more information about Siebel Search, see the *Siebel Search Administration Guide*.

Database Requirements

Make sure your database administrator has installed the RDBMS your site will be using. During installation of the Siebel Server, you must have an established connection to that database for installation to be successful. For more information, see Chapter 3, "Configuring the RDBMS."

The RDBMS you are using must support the same languages and code pages that you will install on the Siebel Servers. To see the code pages and languages supported both for Siebel Servers and the RDBMS, refer to *System Requirements and Supported Platforms* on Siebel SupportWeb.

Third-Party Software Requirements

Make sure that you have already installed the appropriate version of all third-party software products required. Otherwise, the Required Software Components prompt appears. For more information, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

Temporary Disk Space

Review the issues described in "Managing Temporary Disk Space Required by Installers" on page 24. For example, make sure you have adequate disk space, and make sure the login ID running the installer has write permissions to this directory.

Configuring Database Connectivity

DB2 UDB for UNIX and Windows. Define a database alias with the proper connection information for your database. This alias will be the connect string used when installing the Siebel Server. Record the connect string in Appendix A, "Deployment Planning Worksheet." You specify this connect string when installing the Siebel Server.

Use either the DB2 Client Configuration Assistant or the Command Line Processor (CLP) to define your database alias. For more information, see IBM documentation such as *DB2 Universal Database for UNIX* or *DB2 Universal Database Command Reference*.

Oracle. Verify that the Oracle Net9 database connectivity software is installed on each machine, according to the Oracle documentation. For database connectivity software requirements, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

Siebel Server connections to the Oracle Database are made through dedicated server processes rather than through Oracle MTS; the use of MTS may negatively affect performance.

Use the Oracle Net9 Easy Configuration utility to define a database alias with the proper connection information for your Siebel Database. Record the connect string in Appendix A, "Deployment Planning Worksheet." You specify this connect string when installing the Siebel Server.

NOTE: Siebel applications support the Oracle 32-bit client. Therefore, if you have installed the Oracle 64-bit client on your Siebel Server, you must include $ORACLE_HOME/lib32 in your LD_LIBRARY_PATH (Solaris), SHLIB_PATH (HP-UX), or LIBPATH (AIX) variable definition. (If you require $ORACLE_HOME/lib for non-Siebel applications, make sure $ORACLE_HOME/lib32 is placed in front of $ORACLE_HOME/lib.)

DB2 UDB for z/OS. For information on configuring database connectivity for DB2 UDB for z/OS, see *Implementing Siebel Business Applications on DB2 UDB for z/OS*.

Verifying Network Connectivity for the Siebel Server Machine

The Siebel Server must have network access to other Siebel Enterprise components, such as the Siebel Gateway Name Server and the Siebel Database on the RDBMS. Use the following procedure to verify that the Siebel Server can access other Siebel Enterprise components.

For information on verifying network connectivity for DB2 UDB for z/OS, see *Implementing Siebel Business Applications on DB2 UDB for z/OS*.

To verify network connectivity for the Siebel Server

1 Verify network connectivity to the Siebel Gateway Name Server and the Siebel Database from the Siebel Server machine, using the test utility for your network type.

For TCP/IP networks, use the ping utility to verify network connectivity.

2 Verify connectivity to the Siebel Database:

■ **Oracle.** Use the tnsping utility and Net9 database alias, as appropriate to your database, from a Command Prompt window to make sure that you can connect to the database, using the network connect string that you defined.

■ **DB2 UDB for UNIX and Windows.** Open a DB2 Command Window to make sure that you can connect to your database.

  a Enter:

  db2 connect to *database_alias* user *user_ID* using *password*

  where:

  ❑ *database_alias* = Your database alias

  ❑ *user_ID* = A valid user name on DB2

  ❑ *password* = The password for that *user_ID*

  If your connection is valid, you should see a message that looks like the following:

  The connection test is successful

  Database Server   = DB2/AIX/Solaris x.x.x
  SQL authorization ID = SADMIN
  Database alias   = *DB_Alias*

  If your connection is not valid, verify your configuration.

  b To close the connection, type db2 terminate.

3 Provide a network connection from the Siebel Server to the Siebel File System.

4 Verify that the Siebel File System directory is visible and that the Siebel service owner account can copy files to and from it.

If you are clustering the Siebel File System, use the Network IP resource or Network Hostname Resource assigned to that cluster file share.

Installing and Configuring the Siebel Server

This section provides instructions for installing the Siebel Server.

There are several prerequisites for launching the installation wizard:

■ Review the Siebel Server deployment requirements. See "Siebel Server Installation Requirements" on page 112.

■ Verify database connectivity. See "Configuring Database Connectivity" on page 115 and "Verifying Network Connectivity for the Siebel Server Machine" on page 116.

■ Prepare for the installation. See "Siebel Server Installation Requirements" on page 112.

Optionally, Siebel Enterprise Server components can be installed together in one installer session. For example, if you install the Siebel Server and Siebel Database Server in one session, the installation flow will be a combination of the steps listed in this topic and the steps listed in "Installing the Siebel Database Server on the Siebel Server" on page 149.

In most cases, the installation should be performed by a nonroot user for simpler administration and maintenance.

NOTE: Whether you install as root or as a nonroot user affects how you would configure autostart for Siebel Server, as described in "Configuring the Siebel Server for Automatic Start on AIX" on page 137 and "Configuring the Siebel Server for Automatic Start on HP-UX and Solaris" on page 138.

Before you install Language Packs, see the information about code pages in "Planning RDBMS Installation and Configuration" on page 22, and see "Siebel Server Installation Requirements" on page 112.

If you are installing from a remote machine, or using X-connectivity software to access a UNIX machine from a Windows machine, see also "Installing from a Remote Server Machine" on page 29.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install and configure a Siebel Server

1 Stop all Siebel Server processes except the one for Siebel Gateway Name Server.

2 **(AIX only)** Verify that the login ID performing installation has permission to run slibclean by asking the administrator to change the permission as follows:

chmod 6555 /usr/sbin/slibclean

3 Log on to the server, using the Siebel user account that you recorded in the copy you made earlier of the worksheet in Appendix A, "Deployment Planning Worksheet."

NOTE: If a Siebel Server is installed by root, then only root can stop and start the server. Use a Siebel account other than root that has the correct authorizations to install. For more information on creating Siebel accounts, see "Creating the Siebel Service Owner Account" on page 34.

4 Open a new shell and navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

For example, for Solaris, navigate to *Siebel_Image*/Solaris/Server/Siebel_Enterprise_Server.

where:

■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as /Siebel_Install_Image/7.8.2.0.

5 Unset any Siebel-specific environment variables. To view current environment variable settings, enter set (Korn shell) or env (C shell) in the shell window.

6 Verify the directories and permissions to those directories into which you will install the product. You must have write and execute permission.

7 To start the Siebel Server installation process, enter the following command. Optionally, append any flags described in "Additional Flags for Installation Commands" on page 95.

. /setup*UNIX_OS*

where:

■ *UNIX_OS* = Your UNIX operating system, such as sol (Solaris), hp (HP-UX), or aix (AIX)

The Installer Welcome screen appears.

8 Click Next.

9 Depending on whether you are installing your Siebel Server files for the first time or adding a new language to an existing instance, take the appropriate action, and then click Next:

■ To install the server software in a new instance, or to install the Siebel Server in the same location where you previously installed Siebel Gateway Name Server, select None as the default and click Next. Proceed to Step 10 on page 118.

■ To install a new language in an existing instance, select the displayed instance and click Next. Proceed to Step 14 on page 120.

For additional information about installing multiple Language Packs, see "Siebel Server Installation Requirements" on page 112.

The Installer Path screen appears.

10 Enter the fully qualified path to the installation directory and click Next or choose a different directory by taking the following steps:

a Click Browse and navigate to the installation directory.

b Record the fully qualified location that you recorded in Appendix A, "Deployment Planning Worksheet."

The directory name should be standard alphanumeric characters, including the underscore. No other characters or spaces are allowed.

11 Click Next.

The Installer Product Selection screen appears.

12 Choose the option to install the Siebel Server, and click Next.

Alternatively, you can install multiple Siebel Enterprise Server components. If you install more than one component at once, the Siebel Enterprise Server installer and the Siebel Software Configuration Wizard prompts you for the installation parameters of each component individually and in the sequence required.

For more information about different ways of deploying Siebel Enterprise Server components, see the *Deployment Planning Guide*.

NOTE: Before proceeding, review the preinstallation requirements for each component you plan to install and perform any necessary preinstallation tasks. See "Siebel Server Installation Requirements" on page 112 and other applicable sections.

The Setup Type screen appears.

13 Choose the type of installation to perform from the following options and click Next to continue:

■ **Typical.** Installs all Siebel Server components.

■ **Compact.** Installs only those components necessary to run the Siebel Server, but no additional components or help. This selection is not supported for the Siebel Server.

■ **Custom.** Lets you customize your installation by choosing the specific components you want to install.

The Custom option allows you to clear any specific server components (listed as follows) that you do not want to install:

❏ Siebel Server Executables

❏ Siebel Server Core Components

❏ Siebel Server Remote Components

❏ Siebel Server Object Manager

❏ Siebel Field Service Components

❏ Data Quality Connector

CAUTION: Do not clear Siebel Server Executables, Siebel Server Core Components, or Application Object Manager, or your Siebel Business Applications will fail.

The Installer Language Selection screen appears, if you have not installed other components in this directory. Otherwise, proceed to Step 15 on page 120.

14 Choose the language or languages to install and click Next.

All servers are installed with at least one primary (base) language. Additional languages can be installed at a later date, if desired. For more information on multilingual deployments, see the *Global Deployment Guide*.

When installing languages at a later date, you must also reinstall any patch releases that were previously installed.

For a list of supported code pages and encoding strategies, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

The installer displays the location into which it will install the Siebel Server and any other servers you have elected to install, and also the disk space required for the software you are installing.

15 Click Next to copy the files for the selected products into the installation location. Alternatively, to change any settings, click Back, adjust your selections, and click Next to return to this screen.

The installer proceeds to install the specified files.

Which screen appears next depends on whether you are installing one or multiple languages.

■ If you are installing more than one language, the Primary Language screen appears. Proceed to Step 16 on page 120.

■ If you are installing only one language, the Address and Port screen appears. Proceed to Step 17 on page 120.

16 Select the primary (base) language and click Next.

This is the primary (base) language for your enterprise—the language in which you want your Siebel Server to run and in which you normally want to read messages.

The Address and Port screen appears.

17 Enter the address and port number of the Siebel Gateway Name Server and click Next.

If you are installing the first Siebel Server for the Enterprise, the Component Groups screen appears.

18 (Optional) You can optionally choose the component groups that you want to be automatically enabled at start-up of the Siebel Server. Then click Next.

NOTE: If you are installing an additional Siebel Server in an existing Enterprise, this step does not apply. Component group settings are inherited from the Enterprise. You can manually disable component groups after installation, using Server Manager.

For example, if Mobile Web Client users must be able to synchronize with this Siebel Server, you must enable Siebel Remote. In general, you should enable component groups for any Siebel product modules you have licensed. If you do not enable component groups during installation, you can do so manually afterwards, using Server Manager.

For a list of server component groups and their individual components, see the *Siebel System Administration Guide*.

The Siebel Enterprise Name screen appears.

19 Enter the name of the new Siebel Enterprise and click Next.

The Siebel File System Path screen appears.

20 Enter the path to the Siebel File System and click Next.

NOTE: The Siebel File System directory must already exist at this time. Create it if it does not already exist.

The Description screen appears.

21 Add a brief description of the Siebel Enterprise and click Next.

The Synchronization Manager screen appears.

22 Accept the default port 40400 for the Synchronization Manager, or change it to another port number that is not used, and click Next.

The Data Matching screen appears.

23 Choose the software this installation uses for data matching and click Next.

The Database Selection screen appears.

24 Choose the database for this Enterprise and click Next.

25 Enter the appropriate configuration information for the database you selected and click Next.

■ **Oracle.** Enter the connect string appropriate for connecting to the database and proceed to Step 28 on page 121.

■ **DB2 UDB for UNIX and Windows.** Enter the name of the database and proceed to Step 29 on page 121.

■ **DB2 UDB for z/OS.** Enter the name of the database and proceed to Step 26 on page 121.

26 (DB2 UDB for z/OS only) Enter the database Schema Qualifier or Table Owner.

(DB2 UDB for z/OS only) The SQL ID screen appears.

27 (DB2 UDB for z/OS only) Accept the default or enter a new SQL ID and proceed to Step 29 on page 121.

(Oracle only) The Tableowner screen appears.

28 (Oracle only) Enter the Tableowner Name.

The database username screen appears.

29 Enter the database username.

The database user password screen appears.

30 Enter the database user password and confirm.

The Chart Server screen appears.

31 Enter the Chart Server host name.

The Chart Image Format screen appears.

32 Select the desired Chart Image Format.

The Encryption Type screen appears.

33 On the Encryption Type screen, select the type of encryption that should be used for network communications (SISNAPI) between the Siebel Server and the Web server, and then click Next:

NONE. No networking encryption. Select this option if you will be configuring SSL between the Siebel Server and the Web server. Later in the configuration process, you will do additional configuration for SSL, starting in Step 44 on page 123.

RSA. Required protocol if you will be using the RSA Security Systems strong encryption feature for data transport.

NOTE: The Siebel Web Server Extension must be configured to use the same protocol. For more information, see Chapter 9, "Installing the Siebel Web Server Extension."

For more information on the options on this screen, see the *Security Guide for Siebel Business Applications*.

The Siebel Server name screen appears.

34 Enter a unique name for this Siebel Server.

The Siebel Server Description screen appears.

35 Enter a unique description for this Siebel Server.

If you selected DB2 UDB for Windows and UNIX in Step 24 on page 121, the DB2 client screen appears. Proceed to Step 36 on page 122. Otherwise, proceed to Step 37 on page 122.

36 (DB2 UDB for UNIX and Windows) Enter the full path to the directory where the DB2 client software is installed.

The Synch Manager port screen appears.

37 Select whether or not to override the Synchronization Manager static port.

If you select Yes, proceed to Step 38 on page 122. Otherwise, proceed to Step 39 on page 122.

The port number override screen appears.

38 Enter a new port number that is not used by any other components.

The Search Server screen appears.

39 Perform one of the following actions, based on your business requirements, and click Next:

■ **Configure as a Search Server.** Proceed to Step 40 on page 122.

■ **Configure to point to a Remote Search Server.** Proceed to Step 41 on page 122.

■ **Skip.** Proceed to Step 42 on page 123.

40 On the Siebel Search screen, enter the full path to the Siebel Search server (Hummingbird) installation directory. Proceed to Step 42 on page 123.

41 On the Remote Search Server screen, enter the hostname and the port number for the Remote Search Server and click Next.

The autostart screen appears.

42 Indicate whether or not this Siebel Server should be enabled for autostart.

The Start the Server screen appears.

43 Indicate whether or not you want to start the server.

The Deploy Secure Sockets Layer in the Enterprise screen appears (in a different wizard).

44 Select whether you want to deploy Secure Sockets Layer (SSL) in your Enterprise.

■ If yes, proceed to .

■ If no, proceed to .

For more information about configuring SSL, see the *Security Guide for Siebel Business Applications*.

45 On the Configuration Type screen, select the level at which you want to configure SSL, and click Next.

■ **Configure Siebel Enterprise SSL.** Configure the Siebel Enterprise Server to use SSL. These settings will be inherited by all Siebel Servers, unless they are configured individually.

■ **Configure Siebel Server SSL.** Configure an individual Siebel Server to use SSL.

46 On the Certificate File Name screen, enter the full path to the certificate file you have already created and click Next.

The CA File Name screen appears.

47 Enter the full path to the CA certificate file you have already created and click Next.

The Private Key File Name screen appears.

48 Enter the full path to the Private Key File Name and click Next.

The Private Key Password screen appears.

49 Enter the password for the Private Key File and confirm it by reentering it.

The Peer Authentication screen appears.

50 Indicate whether or not you want to implement peer authentication by selecting yes or no.

The Validate Peer Certificate screen appears.

51 Indicate whether or not you want to validate peer certificate.

The wizard displays the configuration parameters you have chosen on previous screen.

52 Review these values for accuracy against the values in your copy of the worksheet in

■ If you need to correct any values, click Previous to go back and fix the value.

■ When you are satisfied, click Next for the wizard to apply the settings.

When configuration activities are completed, a message box appears with the following text:

`The configuration changes were applied successfully.`

53 To complete the installation, click Finish.

The Finish screen appears. Your installation is not complete if this screen does not appear.

Postinstallation Tasks for Siebel Server

Perform the following tasks after running the Siebel Server installation program:

■ (Optional) Configuring your security adapter—see the *Security Guide for Siebel Business Applications*

Reviewing the Installation for Siebel Server

The following minimum directories are created for the Typical selection for a Siebel Server installation. These directories, the files and subdirectories they contain, and various other files are created in the $*SIEBEL_HOME* directory you specified during the installation.

admin. The template files used for scripts that control the running and configuration of Siebel Server.

bin. Binary file directory, containing executables, scripts, and language subdirectories related to language-specific server components. Also contains files used by Siebel Technical Support for installation workarounds.

classes.

dbtempl. Contains dictionary and local database files required by Siebel Remote for regional users and Mobile Web Client users.

docking. Contains transaction files, visibility, and other databases required by Siebel Remote.

enterprises. Files specific to a particular enterprise; contains a server subdirectory that contains files specific to a particular server (for example, log files).

FirstLogic. Contains configuration files related to Siebel Data Quality Matching and Data Cleansing.

help. Contains help files.

input. Contains files related to Siebel Remote.

install. Contains files used by the UNIX installer.

install_script. Contains files related to installation and configuration.

isstempl. Contains templates for Customer Order Management CDA application and engine files for newly created projects. Do not modify any files in the directories isstempl/*lang*/EngineSourceFiles or isstempl/*lang*/NewProjectDefault, unless directed to do so by Siebel Systems engineers.

IVSE.LIC. Merant ODBC Driver license file.

lex. Language-related files.

lib. Library subdirectory. Contains the *.so or *.sl files used in LDAP or other applications.

locale. Contains language-specific files.

log. Contains client and utility log files.

msgtempl. Stores language-specific files for mail merge.

mw. Contains MainWin binaries, libraries, and scripts that function as a Windows interface. For more information, see Technical Note 2240 on Siebel SupportWeb.

nlp. Contains natural-language processing files.

objects. Contains language-specific Siebel Repository files.

NOTE: Monitoring of any SRF file by virus scanning software may significantly degrade Siebel Server performance. If you have virus scanning software installed on your computers, you should configure it to skip SRF files. Because these files are binary data files, the risk of virus infection is low, and so excluding these files from scanning should be acceptable. Alternatively, you may choose to scan SRF files, but less frequently than other files.

output. Contains files related to Siebel Remote.

reports. Contains the report executable programs used by Siebel Proposals to include reports in proposals.

SDQConnector. Contains the DLLs, configuration files, and other files necessary to connect the Siebel Data Quality Universal Connector to one or more external data quality products. An external data quality product is certified though the Siebel Alliance program.

search. Contains the indexes and scripts used to administer and execute Siebel Search and Siebel Advanced Search.

sqltempl. Contains SQL statements used by Siebel Server components. These files should not be modified.

SYBSsa80. Contains the SQL Anywhere 8.0 engine and an ODBC driver.

sys. The Service entry files and odbc.ini files used by the Siebel Server and server control utilities. Do not edit or modify these files unless instructed to do so by Siebel Support.

tclient. Contains Web server-related files.

temp. Stores temporary files for use by the Siebel Server.

upgrade. Contains files and scripts related to version upgrades of Siebel Business Applications. Also holds temporary, backup, and state log files used during an upgrade.

webmaster. Contains files (including CSS files, IMG files, JS files, and others) that are updated to each Web server when the Web server is restarted, or when an administrator uses the SWE command UpdateWebImages to manually refresh the files on the Web server.

For more information, see "Updating Web Server Static Files on the SWSE Using the Web Update Protection Key" on page 191. See also the section about adding a password for updating Web server static files, located in the *Security Guide for Siebel Business Applications*.

webtempl. Contains Siebel Web templates that support the applets and views required for any type of Web client for the Siebel applications.

xml. Web server-related files.

base.txt. Contains primary (base) language and version information.

language.**txt.** Contains language and version information, where *language* is ENU, FRA, or another installed language.

upgrade.log. Contains information logged from upgrading.

Verifying the ODBC Data Source for DB2 UDB

The Siebel Server installation program automatically creates an ODBC system data source name (DSN) that it uses to connect to the Siebel Database on the RDBMS. Prior to verifying the Siebel Server ODBC data source, make sure that the Siebel Server service is started.

CAUTION: Do not change the default settings created automatically with the ODBC data source.

For more information about the ODBC data source, see "Planning RDBMS Installation and Configuration" on page 22.

To verify the ODBC data source for DB2 UDB for UNIX and Windows (on UNIX) and for DB2 UDB for z/OS

1 Open the db2cli.ini file in the $*SIEBEL_HOME* directory and make sure that there is a section called [siebsrvr_*enterprisename*], where *enterprisename* is the name given the Siebel Enterprise during installation, for example sieb78.

2 Verify that the following two values are present in the section:

dbalias = *aliasname* (the database alias catalogued for your DB2 UDB for UNIX and Windows or DB2 UDB for z/OS database server)

txnisolation = 1

If the section is missing, run the configdb2 script in $*SIEBEL_HOME*/bin to set it, and then reverify that the section is present.

3 Verify that the SIEBEL_UNIXUNICODE_DB environment variable is set to DB2.

NOTE: If you use Siebel Marketing, which requires simultaneous heterogeneous database connectivity, set this variable to ORACLE, regardless of your database platform.

4 Source the siebenv.csh (C shell) or siebenv.sh (Korn or Bourne shell) file.

5 Test the connection by navigating to $*SIEBEL_HOME*/bin and entering the command:

odbcsql /u *user_name* /p *password* /s *ODBC_DSN*

where:

■ *ODBC_DSN* = The ODBC data source name, in the form siebsrvr_*enterprisename*, where *enterprisename* is the name of your Siebel Enterprise

If you do not receive an error message, the ODBC connection is working.

Verifying the ODBC Data Source for Oracle

The Siebel Server installation program automatically creates an ODBC system data source name (DSN) that it uses to connect to the Siebel Database on the RDBMS. Prior to verifying the Siebel Server ODBC data source, make sure that the Siebel Server service is started.

CAUTION: In general, do not change the default settings created automatically with the ODBC data source. However, if you have upgraded from Oracle 8*i* to either Oracle 9*i* or 10*g*, or if you manually created your ODBC, it is critical that you check your ODBC settings, as shown in the following procedure.

For more information about the ODBC data source, see "Planning RDBMS Installation and Configuration" on page 22.

To verify the ODBC data source for Oracle

1 Navigate to the file $*SIEBEL_HOME*/sys/.odbc.ini, and open this file for editing.

2 Locate the section of the file containing a reference to ServerName and Driver.

This section defines the ODBC DSN for Siebel Server. A sample section is represented in the following example. The ServerName, Driver, ColumnsAsChar, and ColumnSizeAsCharacter parameters are the most critical for this procedure:

```
[SiebSrvr_EnterpriseName]
Description=Oracle901
ServerName=dvlsun6
Driver=$SIEBEL_HOME/lib/SEor818.so
ColumnsAsChar=1
ColumnSizeAsCharacter=1
```

CAUTION: The ColumnsAsChar and ColumnSizeAsCharacter parameter settings are required, in order for the ODBC driver to behave correctly.

The ServerName should be the Oracle connect string you entered while installing the Siebel Server. (To verify this connect string, run sqlplus.) The driver should point to $SIEBEL_HOME/lib/SEor818.so, allowing you to verify the existence of this file.

3 Verify that the SIEBEL_UNIXUNICODE_DB environment variable is set to ORACLE.

NOTE: If you are using Siebel Marketing, which requires simultaneous heterogeneous database connectivity, you need to set this variable to ORACLE, regardless of your database platform.

4 Source the siebenv.csh (C shell) or siebenv.sh (Korn or Bourne shell) file.

5 Test the connection by navigating to $SIEBEL_HOME/bin and entering the command:

```
odbcsql /u user_name /p password /s ODBC_DSN
```

where:

■ ODBC_DSN = The ODBC data source name, in the form siebsrvr_enterprisename, where enterprisename is the name of your Siebel Enterprise

If you do not receive an error message, the ODBC connection is working.

If your ODBC DSN is not working, the program exits with an error message. For more information, see .

Establishing Network Connectivity for Mobile Users

Siebel Mobile Web Client users must be able to connect to the Siebel Remote Server, using TCP/IP to synchronize with the master database. Make sure that you have the correct network software and hardware installed to support this connectivity and that your remote users are able to establish a TCP/IP connection to the server, using the ping utility.

See also the *Siebel Remote and Replication Manager Administration Guide*.

Preparing to Run Siebel Server Components After Installing

When you installed your Siebel Server, you specified which server component groups should be enabled. Before you deploy your Siebel Server, you should verify that server components you require are enabled. It is also recommended to disable any server components you do not require.

After installing the Siebel Server, you must synchronize any batch components before you can operate them. You should also do this after upgrading the Siebel Database.

In an upgrade scenario, after you install Siebel Servers and after you upgrade the Siebel Database, the S_SRM_ACTION and S_SRM_ACT_PARAM tables are truncated, with the result that component job definitions are deleted. To help you re-create these definitions, it is recommended that you save component job definitions before you upgrade.

For example, you can export data from the S_SRM_ACTION table using Siebel EIM, then import this data into the same table after upgrading the database and synchronizing batch components. For more information about using Siebel EIM, see the *Siebel Enterprise Integration Manager Administration Guide*.

For detailed information about enabling or disabling components after installing, synchronizing batch components, creating server component job definitions, using Server Manager, and related topics, see the *Siebel System Administration Guide*.

Siebel Enterprise Server and Siebel Server parameter settings can be migrated from one Siebel application environment to another by using the configuration upgrade utility (cfgmerge). Other customized application data can be migrated by using the Application Deployment Manager (ADM). For detailed information about using these utilities, see *Going Live with Siebel Business Applications*.

Disabling Language-Specific Application Object Managers

The installation of each Siebel Language Pack includes language-specific Application Object Managers (AOMs) that do not overwrite those related to other Language Packs you may have already installed.

NOTE: After you install all the Language Packs you require among all the Siebel Servers in your Enterprise, you must install all the same Language Packs among all your Web servers. For more information about this, see Chapter 9, "Installing the Siebel Web Server Extension."

When you enable a component group for a Siebel Enterprise Server, you automatically enable the language-specific AOMs for that component for all the Siebel Servers in that Siebel Enterprise Server.

If your deployment is multilingual, you must disable the language-specific AOMs that are running by default (such as the AOMs for your primary language) on any Siebel Server that you want to dedicate to a secondary language.

To disable language-specific AOMs on Siebel Servers

1 Navigate to $SIEBEL_HOME/bin.

2 Execute the following command:

disable_lang.ksh *lang server1* [*server2...*]

where:

- ■ *lang* = The language component you want to disable

- ■ *server1*, *server2*, = Names of the Siebel Servers on which you want to disable the component

For example:

disable_lang ENU siebsrvr1 siebsrvr2

NOTE: Do not place commas between the server names.

If the execution was successful, you should see the srvrmgr banner, which this script invokes, and a message:

connected to *0* servers of *n*

A second message (command completed) appears as many times as you specified servers on which to disable language-specific AOMs.

Managing Load Balancing for Siebel Applications

The topics in this section describe configuring load balancing for your Siebel applications. Both native Siebel load balancing and third-party load balancing are supported.

NOTE: Topics in this section describe initial configuration of load balancing. For additional information about managing load balancing for your deployment, see the *Deployment Planning Guide* and the *Siebel System Administration Guide*. For more information about implementing third-party load balancing, see Technical Note 540 on Siebel SupportWeb.

Generating the Load Balancing Configuration File (lbconfig.txt)

You must generate a load balancing configuration file (lbconfig.txt) in the following situations:

- ■ Before installing the Siebel Web Server Extension (SWSE) when you are using Siebel load balancing.

- ■ To provide URLs for routing rules as part of configuring a third-party HTTP load balancer.

- ■ When you add or remove a Siebel Server and you are using either Siebel load balancing or a third-party load balancer.

The load balancing configuration file provides virtual server definitions for Siebel load balancing. It also provides URLs for writing connection rules for third-party HTTP load balancers.

Prerequisites. Generating the file has the following prerequisites:

■ Verify that all the Siebel Servers for which you want to provide load balancing are running.

■ On each Siebel Server, verify that the Application Object Managers (AOMs) you want to load balance are enabled. Disable any AOMs that will not be used.

NOTE: If you have optimized the existing lbconfig.txt by creating multiple virtual server definitions, you will lose these changes when you generate the file. To prevent this, save the file under another name before generating it. Then copy your changes to the new file.

To generate the lbconfig.txt file

1 On a Siebel Server, start the Server Manager at the enterprise level (do not use the /s option) and enter the following command:

```
generate lbconfig
```

This generates the lbconfig.txt file. The file is stored in the admin subdirectory of the Siebel Server installation directory.

2 Review the generated lbconfig.txt file to verify that virtual server definitions do not include any Siebel Servers that will not participate in load balancing. (If documented prerequisites were observed, you should not see this.)

3 Copy the lbconfig.txt file to the Web Server directory on all Web servers that will be used for load balancing.

As an alternative, copy the file to a shared filesystem location accessible by all the Web servers.

When installing the Siebel Web Server Extension on a Web server, you will be prompted for the location of this file.

4 Restart the Web server.

Setting Up Third-Party HTTP Load Balancers

Third-Party load balancers receive SISNAPI messages from the Web server. The load balancer routes these messages based on the URL that they contain. To configure an HTTP load balancer, you must write connection rules that route these messages to the correct Siebel Servers.

Siebel Systems provides a utility to generate these rules. The utility reviews the configuration of the Siebel Servers. It then generates a file that pairs connection strings included in SISNAPI messages with paths to the correct Siebel Servers. The rules are stored in the load balancing configuration file (lbconfig.txt). Use this file to help configure the load balancer.

The file provides three types of connection rules: component rules, server rules, and round-robin rules. These rules types are mandatory. You must include all three types when you configure the load balancer.

■ Not configuring round-robin rules can cause login failures.

■ Not configuring server rules can cause unexpected session termination.

Most load balancers allow you to associate a virtual IP (VIP) address and port number with a group of load balancing rules. They also allow you to define servers as resources and to create groups for them. The procedure below outlines the general steps for setting up load balancers for Siebel Servers.

Prerequisites

■ The third-party HTTP load balancer should be one certified by Siebel Systems. For a list of these load balancers, see *System Requirements and Supported Platforms* on Siebel SupportWeb. Noncertified load balancers must have the following characteristics:

- ■ Must be an HTTP load balancer capable of level 7 HTTP routing. Must be able to parse URLs in HTTP headers.

- ■ Must allow end-points to manage TCP connections. Specifically, must allow one-to-one mapping between client and server TCP sessions. Also, must not do back-end connection pooling, such as reverse proxy server pooling.

■ Verify that all the Siebel Servers for which you want to provide load balancing are running.

■ On each Siebel Server, verify that the Application Object Managers (AOMs) you want to load balance are enabled. Disable any AOMs that will not be used.

■ Prior to installing the Siebel Web Server Extension, select an unallocated, static VIP address and port number for the load balancer.

■ Generate the load-balancing configuration file (lbconfig.txt). Review the HTTP load balancer rule types: component rules, server rules, and round-robin rules.

■ Install the Siebel Web Server Extension on the desired Web servers. The installation wizard will ask you to choose Siebel load balancing or third-party load balancing. Choose third-party load balancing and enter the VIP address and port number for the load balancer.

■ At least one Siebel Server must be installed and running.

To set up a third-party HTTP load balancer

1 Install and complete initial configuration of the third-party HTTP load balancer.

Refer to the vendor documentation for details.

2 Verify that the load balancer can work with the machines that will host the Siebel Servers.

Refer to the vendor documentation for networking requirements.

3 Add the desired Siebel Servers to the load balancer as pools of resources.

Typically, each resource is defined as a combination of hostname or IP address, and TCP Port. For Siebel Server load balancing, use the hostname or IP address of the Siebel Server, and the SCBroker port.

4 Create load balancing rules or content rules in the load balancer.

Load balancing rules are mappings between URLs and pools of resources. For each line in the lbconfig.txt file, create one such mapping or rule in the load balancer.

Check Siebel SupportWeb for specific configuration instructions and automatic configuration scripts for certified load balancers.

NOTE: You must configure the HTTP load balancer to handle all three types of rules: component, server, and round-robin.

5 For each group of load balancing rules, define the desired load balancing scheme.

For component rules, use any preferred load balancing scheme.

For server and round-robin rules, a round-robin load balancing scheme is recommended.

6 Define a VIP address and virtual port for all the load balancing rules.

The VIP and virtual port must match the VIP and virtual port specified in the object manager connect strings of the Siebel Web Server Extension configuration file (eapps.cfg).

This file is located in *SWSE_ROOT*\bin, where *SWSE_ROOT* is the Siebel Web Server Extension installation directory.

7 If the load balancer has a configurable TCP connection time-out, adjust the time-out so that it is greater than the SISNAPI ConnIdleTime setting.

This prevents the load balancer from disconnecting active SISNAPI sessions. For information on setting SISNAPI ConnIdleTime, see the *Siebel System Administration Guide.*

Setting the Load Balancer Connection Time Out

Many third-party HTTP load balancers allow you to set a connection time-out. When the time-out occurs, the SISNAPI connection to the application object manager (AOM) on the Siebel Server is terminated.

In addition, AOMs have a configurable time-out parameter, Connection Maximum Idle Time (ConnIdleTime). When a session is idle for the specified time, the AOM closes the session.

Set the load balancer time-out to be slightly longer than the Connection Maximum Idle Time of the AOMs for which it will provide load balancing.

For example, if the AOM Connection Maximum Idle Time is 600 seconds, set the load balancer connection time-out to 601 seconds or higher.

Avoid setting the AOM Connection Maximum Idle time to be greater than the load balancer connection time-out. This can cause login screen delays and communications performance problems.

Monitoring Servers with Third-Party HTTP Load Balancers

Most third-party HTTP load balancers support server health monitoring. To set up Siebel Server monitoring, configure the load balancer to send an HTTP GET to the server URL. Here is an example URL:

//SiebSrvr1:2321/sieb78/SCBroker

where:

■ SiebSrvr1 = The Siebel Server host name or IP address

■ 2321 = The port number for the Siebel Connection Broker (SCBroker). The default is 2321.

■ sieb78 = The Siebel Enterprise Server name

■ SCBroker = The Siebel Connection Broker server component

If the Siebel Server and Siebel Connection Broker are running, Siebel Connection Broker returns the string: SCBroker OK.

This confirms that the Siebel Server is running on the specified platform and that SCBroker is listening at the specified port. This health check does not verify that specific Application Object Managers (AOMs) or other server components are running on the platform.

CAUTION: Do not use TCP Health Check. It may connect to SCBroker and remain connected. This causes SCBroker to wait until the SCBroker component parameter ConnRequestTimeout expires. During this period, SCBroker cannot handle new user-session requests.

Best Practices for Setting Up Monitoring

Implement the following best practices when you set up server monitoring:

■ On the Siebel Servers you want to monitor, set the Default Tasks and Maximum Tasks parameters for SCBroker to 2. This provides two instances of SCBroker, which helps prevent monitoring requests from delaying handling of user requests.

■ Use HTTP 1.0 to do health checks. It terminates connections to SCBroker quickly.

Installing Additional Siebel Servers for an Existing Siebel Enterprise Server

Before creating additional Siebel Servers, you should have installed and configured your Web server, and installed and configured the Siebel Web Server Extension (SWSE) plug-in. Doing this allows you to test the connection to the additional servers. For information about installing the SWSE, see Chapter 9, "Installing the Siebel Web Server Extension."

Run the Siebel Enterprise Server installer to install Siebel Servers on additional machines in your Siebel Enterprise.

Alternatively, you can use the `config_server` script to create an additional Siebel Server on a single machine where Siebel Server is already installed, as described in the following procedure.

NOTE: Creating multiple Siebel Servers on a single machine is typically done *only for test or development purposes*. In your production environment, it is strongly recommended that you create only one Siebel Server per machine.

To create an additional Siebel Server on a single machine

1 Log on as the Siebel Service Owner to the machine where the Siebel Server software is installed.

2 In the shell window, enter env and verify that the environment variable *SIEBEL_GATEWAY* is set to the actual Gateway IP address or network name of the Siebel Gateway, and the variable *SIEBEL_ROOT* is set to the Siebel root directory.

The `config_server` script uses the values for these environment variables unless they are overridden by command-line arguments. For details on the switches you can use, see .

3 If the Siebel environment variables are not set or are set incorrectly, navigate to the $*SIEBEL_HOME* directory and choose the appropriate command for your UNIX shell to source the Siebel environment file.

Bourne or Korn shell

> `. ./siebenv.sh`

> **TIP:** Make sure there is a space between the initial period and ./siebenv.sh.

C shell

> `source siebenv.csh`

Before sourcing the Siebel environment file, make sure you have your database environment set up correctly. Specifically, verify that the LD_LIBRARY_PATH (Solaris), SHLIB_PATH (HP-UX), or LIBPATH (AIX) environment variable contains the full path name for your database client library directory. If you do not set up the database environment properly, you will receive an error message.

4 Start the Siebel Enterprise Server configuration by entering `config_server`.

The `config_server` script accepts the command-line flags described in .

5 If you did not specify a Siebel Server with a command-line flag, you must choose an existing server to configure or select the option to create a new server:

■ If you choose to edit an existing server, it has to be a server that has not been configured yet. You cannot use the wizard to reconfigure an already configured server. To reconfigure a server, you have to uninstall and reinstall the server.

■ If you choose to create a new Siebel Server, the `config_server` script prompts you to choose a new directory for the Siebel Server and to configure it.

CAUTION: You cannot install your second Siebel Server in the same root directory as your first Siebel Server.

6 For the remaining steps you need to follow, see the steps described under "Installing and
Configuring the Siebel Server" on page 117.

The config_server script exits after it completes the chosen task.

Flags for config_server Script

Table 17 on page 136 lists all the flags you can use with the config_server script to configure a
Siebel Server.

Table 17. Config_server Flags

Flag	Parameter	Definition	Description
-r	*siebel_root*	(Required) The full path to the Siebel root directory	If -r is not specified in your command line, the value of the $*SIEBEL_ROOT* environment variable is used, so you have to make sure this environment variable is set prior to executing server_config without the -r switch. If $*SIEBEL_ROOT* is set to the Siebel root directory, then there is no need to have the -r switch and value in your command line.
-g	*siebel_gateway*	(Required) The Siebel Gateway Name Server, in the form of the IP address or network name followed by a colon and the port number (by default, this is 2320)	If -g is not specified in your command line, the value of the $*SIEBEL_GATEWAY* environment variable is used, so you have to make sure this environment variable is set prior to executing server_config without the -g switch. If $*SIEBEL_GATEWAY* is set to the IP address or network name of the Siebel Gateway Name Server, then there is no need to have the -g switch and value in your command line.
-e	*enterprise_server*	(Optional) The Siebel Enterprise Server in which to operate	If the Enterprise Server is not specified and multiple Siebel Enterprise Servers are defined, you will be prompted with a list of the Siebel Enterprise Servers.
-s	*siebel_server*	(Optional) The existing Siebel Server to configure	If this Siebel Server is not specified, you will be prompted with a list of all existing Siebel Servers and given the option of defining new ones.

Enabling Siebel Remote for Multiple Siebel Servers on a Machine

When installing multiple Siebel Servers on a single machine, normally only the first Siebel Server installed can be configured to support Siebel Remote. If you need to enable Siebel Remote on each Siebel Server, install these Siebel Servers into separate directories, so that they do not share the same installation files.

Configuring the Siebel Server for Automatic Start on AIX

If, during installation, you elected automatic restart of the Siebel Server, you need to complete the procedure that follows to enable it.

To configure Siebel Server to start automatically

1 Navigate to $*SIEBEL_HOME*/bin.

where:

■ $*SIEBEL_HOME* = The installation directory for the Siebel Server

2 Using any text editor, open the file si ebel _server, and edit the database environment variable as described below:

Oracle

a Uncomment the line #ORACLE_HOME=.

b Enter the location for $ORACLE_HOME.

c Uncomment the line #export ORACLE_HOME.

d Add the following two lines:

TNS_ADMIN=$*tns_admin*

export TNS_ADMIN

Ask your database administrator for the value of $*tns_admin*.

DB2 UDB

■ Add a line to execute db2profile, for example:

. /home/db2v8aix/sqllib/db2profile

Ask your database administrator for the location of db2profile.

3 Save and close the file.

4   Log on as root and execute the following command on a single line:

```
mkitab "start_server:2:wait:su - SIEBEL_ACCOUNT -c \"$SIEBEL_HOME/bin/
siebel_server start\""
```

where:

■   *SIEBEL_ACCOUNT* = The user account installing the Siebel products

■ $*SIEBEL_HOME* = The installation directory for the Siebel Server

5   Verify whether or not the file /etc/rc.shutdown exists. If it does not exist, create it and change the permissions:

```
touch /etc/rc.shutdown
```

```
chmod 744 /etc/rc.shutdown
```

6   Edit the file /etc/rc.shutdown to add the following command:

```
/usr/bin/su - SIEBEL_ACCOUNT -c "$SIEBEL_HOME/bin/siebel_server stop"
```

where:

■   *SIEBEL_ACCOUNT* = The user account installing the Siebel products

■ $*SIEBEL_HOME* = The installation directory for the Siebel Server

7   Save and close the file.

Configuring the Siebel Server for Automatic Start on HP-UX and Solaris

This section describes how to configure autostart for your Siebel Servers running on HP-UX or Solaris. The process differs based on whether you installed as root.

Configuring Siebel Server Autostart When Installed as Root on HP-UX and Solaris

If you installed Siebel Server as root, complete one of the procedures that follow to enable autostart.

Which procedure you use depends on whether or not you previously enabled autostart when you installed the Siebel Server. This will determine whether a copy of the siebel_server script already exists. The script is located in /sbin/init.d (on HP-UX) or /etc/init.d (on Solaris):

■   If your Siebel Gateway Name Server and Siebel Server are on the same machine, use the procedures in .

■   If your Siebel Gateway Name Server and Siebel Server are on different machines, use the procedures under .

Configuring Siebel Server Autostart If Autostart Was Enabled Earlier

If you have a copy of the siebel_server script in the appropriate location, because autostart was enabled earlier, complete the appropriate procedure for your platform to configure autostart.

To configure Siebel Server for autostart using the siebel_server script on HP-UX and Solaris

1 Log on as root.

2 Using any text editor, edit /sbin/init.d/siebel_server (HP-UX) or /etc/init.d/siebel_server (Solaris) and set the $*SIEBEL_SERVER_ROOT* variable to the actual path for the Siebel Server installation directory.

3 Save the script and exit the editor.

If you have multiple Siebel Servers on the same machine for which you want to enable automatic startup, you must edit the siebel_server script by adding each new *SIEBEL_ROOT* to the $*SIEBEL_SERVER_ROOT* variable, separated by spaces.

For example, suppose that the first Siebel Server is in the /usr/local/siebel directory and the second one is in the /vol1/siebel directory, then you need to set the $*SIEBEL_SERVER_ROOT* variable in the siebel_server script as follows:

```
$SIEBEL_SERVER_ROOT="/usr/local/siebel /vol1/siebel"
```

Configuring Siebel Server Autostart If Autostart Was Not Enabled Earlier

If you do not have a copy of the script siebel_server in the appropriate location, because autostart was not enabled earlier, complete the appropriate procedure that follows for your platform to configure your server for autostart.

To configure the Siebel Server to start automatically under HP-UX

1 Log on as root to the machine on which the Siebel Server was installed.

2 Copy the siebel_server script to the /sbin/init.d directory, as shown:

```
cp $SIEBEL_HOME/bin/siebel_server /sbin/init.d
```

3 Set the appropriate permissions by executing the following command:

```
chmod 755 /sbin/init.d/siebel_server
```

4 Create a soft link to /sbin/rc3.d/S720siebel_server from /sbin/init.d/siebel_server by executing the following command:

```
ln -s /sbin/init.d/siebel_server /sbin/rc3.d/S720siebel_server
```

NOTE: The preceding command assumes that you bring up your Siebel Server in init state 3.

5 Create a soft link to /sbin/rc2.d/K320siebel_server from /sbin/init.d/siebel_server, by executing the following command:

```
ln -s /sbin/init.d/siebel_server /sbin/rc2.d/K320siebel_server
```

To configure the Siebel Server to start automatically under Solaris

1 Log on as root to the machine on which the Siebel Server was installed.

2 Copy the siebel_server script to the /etc/init.d directory, as shown:

    cp $SIEBEL_HOME/bin/siebel_server /etc/init.d

3 Set the appropriate permissions by executing the following command:

    chmod 755 /etc/init.d/siebel_server

4 Create a soft link to /etc/rc3.d/S72siebel_server from /etc/init.d/siebel_server, by executing the following command:

    ln -s /etc/init.d/siebel_server /etc/rc3.d/S72siebel_server

NOTE: The preceding command assumes that you bring up your Siebel Server in init state 3.

5 Create a soft link to /etc/rc2.d/K32siebel_server from /etc/init.d/siebel_server, by executing the following command:

    ln -s /etc/init.d/siebel_server /etc/rc2.d/K32siebel_server

Configuring Siebel Server Autostart When Not Installed as Root on HP-UX and Solaris

If you installed your Siebel Server as a nonroot user, complete one of the procedures that follow to configure it for autostart as a nonroot user.

To configure autostart to run as a nonroot Siebel account user under HP-UX

1 Log on as root.

2 Create or edit /sbin/init.d/siebel_server_nonroot to add the following line:

    /usr/bin/su - SIEBEL_ACCOUNT -c "/sbin/init.d/siebel_server $1"

where:

■ *SIEBEL_ACCOUNT* = The user account installing Siebel applications

3 Remove /sbin/rc3.d/S720siebel_server and /sbin/rc2.d/K320siebel_server, if they already exist.

4 Execute the following commands:

    chmod 755 /sbin/init.d/siebel_server_nonroot

    ln -s /sbin/init.d/siebel_server_nonroot /sbin/rc3.d/S720siebel_server

    ln -s /sbin/init.d/siebel_server_nonroot /sbin/rc2.d/K320siebel_server

To configure autostart to run as nonroot Siebel account user under Solaris

1 Log on as root.

2 Create or edit /etc/init.d/siebel_server_nonroot to add the following line:

    /usr/bin/su - *SIEBEL_ACCOUNT* -c "/etc/init.d/siebel_server $1"

where:

■ *SIEBEL_ACCOUNT* = The user account installing Siebel applications

3 Remove /etc/rc3.d/S72siebel_server and /etc/rc2.d/K32siebel_server, if they already exist.

4 Execute the following commands:

    chmod 755 /etc/init.d/siebel_server_nonroot

    ln -s /etc/init.d/siebel_server_nonroot /etc/rc3.d/S72siebel_server

    ln -s /etc/init.d/siebel_server_nonroot /etc/rc2.d/K32siebel_server

Managing Environment Variables

There are several environment variables that must be properly set for optimal functioning of the Siebel Server, as shown in Table 18 on page 141. These include:

■ Siebel environment variables

■ UNIX operating system environment variables

NOTE: For information on tuning the UNIX kernel and other parameters for Siebel Server optimization, see the *Performance Tuning Guide*.

Table 18.   Setting and Managing Environment Variables

Environment Variable	Purpose	Recommended Siebel Value
ODBCINI	Tells the ODBC driver manager which file to open to look for the ODBC data source and driver information. Set within the Siebel environment files, siebenv.sh and siebenv.csh, which are created during Siebel Server installation and configuration. Always points to $*SIEBEL_HOME*/sys/.odbc.ini.	Do not modify.

Table 18.   Setting and Managing Environment Variables

Environment Variable	Purpose	Recommended Siebel Value
SIEBEL_UNIXUNICODE_DB	Controls the ODBC driver manager responsible for connection to the RDBMS. Reset, if necessary, within each Siebel environment file before sourcing it.	Set to DB2 or ORACLE. This is automatically set by the installer.
LANG	Language environment variable within the Siebel environment file. Sets the database server client environment appropriate to the language of installation. For more information, see "Specifying the Locale for Siebel Applications" on page 26 and "Specifying the Locale for Your UNIX Operating System" on page 27.	Set this to the language in which your database runs.

The Siebel environment variables $SIEBEL_HOME$ and $SIEBEL_ROOT$ must be set to enable execution of the Siebel Gateway Name Server and Siebel Server management utilities documented in the *Siebel System Administration Guide*.

During Siebel Gateway Name Server and Siebel Server installation and configuration, the script files siebenv.csh (for the C shell and its variants) and siebenv.sh (for the Bourne and Korn shells and their variants) are automatically created in the $SIEBEL_HOME$ directory. When sourced, these shell scripts set the environment variables.

If you have configured your Siebel Server to start manually, you must source siebenv.* before starting the server. For this reason, you may want to add a call to the appropriate siebenv.* script to the logon files of all Siebel administrator UNIX accounts, so that these variables are set automatically whenever a Siebel administrator logs on.

NOTE: If you want to change the default settings of these environment variables, you must do so before you start the Siebel Server.

UNIX Tuning for Siebel Applications

There are several UNIX system environment variables you must set for proper functioning of the Siebel Server.

For detailed information on tuning the UNIX kernel and other tunable parameters for Siebel Server optimization, see the *Performance Tuning Guide*.

See also "Siebel Server Installation Requirements" on page 112, "Specifying the Locale for Siebel Applications" on page 26, and "Specifying the Locale for Your UNIX Operating System" on page 27.

Troubleshooting Siebel Server Installation

Installation problems can be caused by a number of things, but the reasons listed in the following section are the most common:

- **Insufficient user privileges.** For information about setting up appropriate administrative user privileges to install, see Chapter 2, "Preparing for Installation."

- **Trying to install the Siebel Server out of sequence.** For the required installation sequence, see Chapter 2, "Preparing for Installation."

- **Failure to install required hardware or software.** Installation errors related to software requirements are logged in the Siebel Enterprise Server installer log file. For prerequisites, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

- **Environment variables not set properly.** For more information about environment variables, see "Managing Environment Variables" on page 141.

- **Faulty network connection.** Sometimes a faulty network connection can result in the system administrator being unable to install to the $*SIEBEL_HOME* directory in which he or she has write privileges. Verify that your network connection is stable.

- **Object Manager does not start.** Heavily used servers running more than 50 instances of Object Manager may experience a condition where some of the Object Managers do not start correctly and log the following error message:

  ```
  Got error 1801210 when dequeuing a connection request (62)
  ```

  This error is rectified by changing TCP stack parameters.

  For more information about sizing Application Object Manager components, see the *Deployment Planning Guide*, the *Performance Tuning Guide*, and documents on Siebel SupportWeb.

Problem: The Siebel Server does not start after configuration.

Solution a: Verify that the Siebel Gateway Name Server was started. Start it if it was stopped.

Solution b: Verify that the values input during configuration were valid.

Solution c: Verify that you have sufficient system privileges to start the service. For more information, see "Creating the Siebel Service Owner Account" on page 34.

Troubleshooting the ODBC Data Source Connection

This section describes troubleshooting steps for your ODBC data source connection.

NOTE: If your database is DB2 UDB for z/OS, see *Implementing Siebel Business Applications on DB2 UDB for z/OS*.

Oracle

Complete the following instructions to troubleshoot Oracle connection problems on Solaris, AIX, and HP-UX. If you are unable to verify if your ODBC connection to your Oracle database is working, you should verify that the value of the environment variable TNS_ADMIN is the exact path of tnsnames.ora.

To troubleshoot a failed ODBC connection on Solaris, AIX, or HP-UX

1 Verify that the Oracle connect string entered as part of Siebel Server configuration is valid.

2 If the connect string entered is correct, check the ODBCINI environment variable to verify that it was set by entering the following command:

    echo ${ODBCINI}

The response should be the following:

    $*SIEBEL_ROOT*/sys/.odbc.ini

3 If the ODBCINI environment variable was correctly set, verify that the .odbc.ini file is valid by reviewing it for the presence of the following parameters:

    [SiebSrvr_*EnterpriseName*]
    ServerName=ora901
    Driver=$*SIEBEL_ROOT*/lib/SEor818.so
    ColumnsAsChar=1
    ColumnSizeAsCharacter=1

If these parameters are not present, the file is invalid.

CAUTION: The ColumnsAsChar and ColumnSizeAsCharacter parameter settings are required for Oracle 9*i*, in order for the ODBC driver to behave correctly.

4 If the .odbc.ini file is valid, verify that the library path includes the path for the ODBC driver on your platform by entering the following command:

Solaris. Use echo ${LD_LIBRARY_PATH}.

AIX. Use echo ${LIBPATH}.

HP-UX. Use echo ${SHLIB_PATH}.

The response should be $SIEBEL_HOME/lib.

NOTE: Siebel applications support the Oracle 32-bit client. Therefore, if you have installed the Oracle 64-bit client on your Siebel Server, you must include $ORACLE_HOME/lib32 in your LD_LIBRARY_PATH (Solaris), SHLIB_PATH (HP-UX), or LIBPATH (AIX) variable definition. (If you require $ORACLE_HOME/lib for non-Siebel applications, make sure $ORACLE_HOME/lib32 is placed in front of $ORACLE_HOME/lib.)

5 If the response illustrated for your platform in was correct and you are verifying a Unicode installation, make sure that the following environment variables are set according to the recommendations from your database platform vendor. These variables should also be set in the siebenv.csh and siebenv.sh scripts.

SIEBEL_UNIXUNICODE_DB=ORACLE

8 Installing the Siebel Database Server and Configuring the Siebel Database

This chapter is written for system administrators who install the Siebel Database Server on a Siebel Server, and for database administrators who perform related tasks on the RDBMS. It includes the following topics:

- "About the Siebel Database and the Siebel Database Server" on page 145

- "Process of Installing the Siebel Database Server" on page 146

- "Preinstallation Tasks for the Siebel Database Server" on page 147

- "Installing the Siebel Database Server on the Siebel Server" on page 149

- "Reviewing the Installation for the Siebel Database Server" on page 153

- "Setting Up Your Environment to Support Global Time Zone" on page 154

- "Creating Table Owner and Administrator Accounts" on page 155

- "Installing the Stored Procedures and User-Defined Functions on DB2 UDB" on page 157

- "Configuring the Siebel Database on the RDBMS" on page 158

- "Postinstallation Tasks for the Siebel Database Server and Siebel Database" on page 169

CAUTION: In an upgrade environment, you install the module called the *Siebel Database Server* on the Siebel Server, following the procedure in "Installing the Siebel Database Server on the Siebel Server" on page 149, *but you do not perform any other tasks mentioned in this chapter.* For more information, see "About Installing in Upgrade Environments" on page 16.

NOTE: If your database is IBM DB2 UDB for z/OS, refer to *Implementing Siebel Business Applications on DB2 UDB for z/OS* instead of this chapter. See also the relevant information under "Planning RDBMS Installation and Configuration" on page 22.

About the Siebel Database and the Siebel Database Server

The *Siebel Database* on the RDBMS stores the data used by Siebel Business Applications. Siebel Server components (particularly Application Object Managers supporting Siebel Web Clients), Siebel Tools clients, and Siebel Developer Web Clients connect directly to the Siebel Database and make changes in real time.

(Siebel Mobile Web Clients download a subset of the server data to use locally, and periodically synchronize with the Siebel Database through the Siebel Server (Siebel Remote components) to update both the local database and the Siebel Database.)

The *Siebel Database Server* refers to a set of files that you install on a Siebel Server machine. These files are accessed when you run the Database Server Configuration Wizard (which is part of the Siebel Software Configuration Wizard) and the Siebel Upgrade Wizard in order to configure the Siebel Database on the RDBMS. (The Siebel Database Server installed software has no run-time role in managing database operations for users running Siebel Business Applications.)

Some of the tasks you can perform with the Database Server Configuration Wizard are for upgrade scenarios only, and are described in the *Upgrade Guide*.

This chapter describes installation of the Siebel Database Server software and running the Database Server Configuration Wizard to install and configure the Siebel Database.

CAUTION: You *must* install the Siebel Database Server in the same directory in which you installed the Siebel Server (for example, /sea78). Otherwise, the installer assumes you are installing components for a different Siebel Enterprise Server. The Siebel Database Server files are installed in the directory /sea78/dbsrvr.

For information about tasks you must perform in the RDBMS before you install the Siebel Database Server, see Chapter 3, "Configuring the RDBMS."

NOTE: You can have only one Siebel Database per Siebel Enterprise Server. A Siebel Server must already be installed on the computer on which you will install the Siebel Database Server software, and the Siebel Database Server must be installed in the same directory as the Siebel Server, as noted in the procedure under "Installing the Siebel Database Server on the Siebel Server" on page 149.

Process of Installing the Siebel Database Server

Installing the Siebel Database Server and configuring the Siebel Database on the RDBMS requires multiple tasks that you should perform in the following sequence:

1 Fill out your copy of the worksheet in Appendix A, "Deployment Planning Worksheet," with all RDBMS-specific information.

2 Create and configure the database instance. See Chapter 3, "Configuring the RDBMS."

   CAUTION: *In an upgrade environment, you do not perform any of the tasks mentioned in the above chapter.* In particular, you do not create the database instance on the RDBMS. However, after the upgrade is complete, you may need to modify database parameters for your RDBMS platform to match settings described in this chapter. For more information, see "About Installing in Upgrade Environments" on page 16.

3 Perform preinstallation tasks. See "Preinstallation Tasks for the Siebel Database Server" on page 147.

4 Install the Siebel Database Server software on the Siebel Server. See "Installing the Siebel Database Server on the Siebel Server" on page 149.

   CAUTION: *In an upgrade environment, you install the Siebel Database Server on the Siebel Server, following the procedure in the above topic, but you do not perform any of the other tasks mentioned in this chapter.* For more information, see "About Installing in Upgrade Environments" on page 16.

5 Review the Siebel Database Server installation. See *"Reviewing the Installation for the Siebel Database Server" on page 153*.

6 If required for your multilingual deployment, reset the Global Time Zone parameter. See *"Setting Up Your Environment to Support Global Time Zone" on page 154*.

7 Create the table owner and administrator accounts. See *"Creating Table Owner and Administrator Accounts" on page 155*.

8 **(DB2 UDB only)** Install stored procedures and user-defined functions on the RDBMS. See *"Installing the Stored Procedures and User-Defined Functions on DB2 UDB" on page 157*.

9 Run the Database Server Configuration Wizard to configure the Siebel Database on the RDBMS, and perform related tasks. See *"Configuring the Siebel Database on the RDBMS" on page 158*.

  a Install tables, indexes, and seed data in the Siebel Database. See *"Installing the Siebel Database Components" on page 158*.

  b Review the database installation log for errors. See *"Reviewing the Log Files for Siebel Database Installation" on page 163*.

  c Import the Siebel Repository into the Siebel Database. See *"Importing the Siebel Repository for the Siebel Database" on page 165*.

  d Review the repository import log files for errors. See *"Reviewing the Log Files for Repository Import for the Siebel Database" on page 168*.

10 Perform postinstallation tasks. See *"Postinstallation Tasks for the Siebel Database Server and Siebel Database" on page 169*.

  a Review the system preference settings for Enterprise Database Server code page. See *"Verifying System Preferences and Other Settings for Database Code Page" on page 169*.

  b If you are deploying multiple languages:

    ❏ Install multilingual seed data. See the information about adding a language to an existing Siebel Database in *"Installing the Siebel Database Components" on page 158*.

    ❏ Import multilingual seed data to your repository tables. See the information about adding a language to an existing repository in *"Importing the Siebel Repository for the Siebel Database" on page 165*.

  c Populate the Siebel File System. See *"Populating the Siebel File System" on page 170*.

Preinstallation Tasks for the Siebel Database Server

Before installing the Siebel Database Server, you must complete the following tasks:

■ Review *"Process of Installing the Siebel Database Server" on page 146*.

  CAUTION: *In an upgrade environment, you install the Siebel Database Server on the Siebel Server, following the procedure in* "Installing the Siebel Database Server on the Siebel Server" *on page 149, but you do not perform any of the other tasks mentioned in this chapter.* For more information, see *"About Installing in Upgrade Environments" on page 16*.

■ Obtain the services of a qualified database administrator to assist you with your installation and, where applicable upgrade.

■ For new installations, make sure that the Siebel Database instance has been created and is properly configured, as documented in Chapter 3, "Configuring the RDBMS."

■ If you already installed the Siebel Server on which you will install the Siebel Database Server, make sure that all the language packs you require are first installed on this Siebel Server. If you require additional languages, install your software using *one* of the following methods:

   ■ Add languages to the Siebel Server. Then install the Siebel Database Server, which installs the same languages installed on the Siebel Server.

   ■ Install the Siebel Database Server, which installs the same languages installed on the Siebel Server. Then add languages to both the Siebel Server and Siebel Database Server, using the Siebel Enterprise Server installer. Adding languages installs them for all products installed under the same $*SIEBEL_ROOT* directory.

   NOTE: You can include languages in a new installation of the Siebel Database on the RDBMS, or add them to an existing Siebel Database later. For details, see "Installing the Siebel Database Components" on page 158.

■ Complete the appropriate RDBMS-specific information in your copy of the worksheet in Appendix A, "Deployment Planning Worksheet," as shown below.

■ Review the issues described in "Managing Temporary Disk Space Required by Installers" on page 24. For example, make sure you have adequate disk space, and make sure the login ID running the installer has write permissions to this directory.

DB2 UDB

Make sure the following elements are defined for your Siebel Database:

■ **Database alias.** This is the appropriate DB2 database alias that you created when you installed the DB2 software.

■ **Table owner/database owner account user name and password.** DB2 UDB requires that you assign a user name and password to each database you create. Before installing the table spaces and indexes, you will be prompted to edit the grantusr.sql script and enter this information. SIEBEL is the default table owner account user name and password for Siebel applications.

■ **Siebel index table space.** The name of the table space on the DB2 UDB server where the Siebel indexes are stored.

■ **Siebel 4-KB table space.** The name of the table space on the DB2 UDB server where the 4 KB Siebel data tables are stored.

■ **Siebel 16-KB table space.** The name of the table space on the DB2 UDB server where tables reside whose row length is equal to or greater than 4005 bytes, but less than 16384 bytes.

■ **Siebel 32-KB table space.** The name of the table space on the DB2 UDB server where tables reside whose row length is 32768 bytes.

■ In Siebel Business Applications, release 7.x, statistics are generated automatically during table, index, and seed data installation for DB2 UDB, and during the repository import process. However, it is recommended that statistics be kept up to date through standard database administration procedures.

■ Make sure you have installed the required IBM Fix Pack on your database server machine. For more information, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

■ Make sure that IBM DB2 UDB is properly configured and you have allocated disk space appropriate to your installation requirements.

Oracle

Make sure the following elements are defined for your Siebel Database:

■ **Oracle SQLNet alias connect string.** You need this to connect to your Oracle database.

■ **Table owner account (schema) name and password.** Oracle requires that you assign a user name and password to any database tables you create. The term *table owner* refers to the schema that owns the database objects, such as tables, indexes, views, and triggers. Prior to installing the Siebel Database components, you need to edit the `grantusr.sql` script and enter this information. `SIEBEL` is the default Table Owner Account user name and password for Siebel applications.

■ **Siebel data table space.** The name of the default table space on the Oracle server where the Siebel data tables are stored.

■ **Siebel index table space.** The name of the default table space on the Oracle server where the Siebel indexes are stored.

■ Install Oracle database client software onto the machine where you will install the Siebel Database Server. Make sure that you have set the `ORACLE_HOME` variable appropriately before installing the Siebel software.

 NOTE: Oracle database client and Oracle database versions must be the same. For supported versions of Oracle, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

Installing the Siebel Database Server on the Siebel Server

Installation of the Siebel Database Server software on a Siebel Server provides files with which you will later configure the Siebel Database on the RDBMS. Complete the steps that follow to complete installation of the Siebel Database Server.

Before you install, review .

CAUTION: *In an upgrade environment, you install the Siebel Database Server on the Siebel Server, following the procedure in this topic, but you do not perform any of the other tasks mentioned in this chapter.* For more information, see .

Optionally, Siebel Enterprise Server components can be installed together in one installer session. For example, if you install the Siebel Server and Siebel Database Server in one session, the installation flow will be a combination of the steps listed in "Installing and Configuring the Siebel Server" on page 117 and the steps listed in this topic.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install the Siebel Database Server software

1 Open a new shell and navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

For example, for Solaris, navigate to *Siebel_Image*/Solaris/Server/Siebel_Enterprise_Server.

where:

■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as /Siebel_Install_Image/7.8.2.0.

2 Verify the directories and permissions to those directories into which you will install the product. You must have write and execute permission.

3 Unset any Siebel-specific environment variables. To view current environment variable settings, enter env in the shell window.

4 To start the Siebel Database Server file installation, enter the following command. Optionally, append any flags described in "Combining Console Mode and Unattended Mode Installation" on page 94.

./setup*UNIX_OS*

where:

■ *UNIX_OS* = Your UNIX operating system, such as sol (Solaris), hp (HP-UX), or aix (AIX)

The Welcome to InstallShield Wizard for Siebel Enterprise Server screen appears.

5 Click Next.

The installer displays the message that an existing installation has been found, because you previously installed the Siebel Server on the same machine.

NOTE: This procedure assumes that you have already installed the Siebel Server on the same machine. In practice, it may be best to install the Siebel Server and the Siebel Database Server at the same time. See also Chapter 7, "Installing the Siebel Server."

6 Depending on whether you are installing your Siebel Database Server for the first time or adding a new language to an existing instance (of any Siebel Enterprise Server components), take the appropriate action:

■ To install a new instance of the Siebel Database Server, select None as the default and click Next. Proceed to Step 7 on page 151.

■ To install a new language in an existing instance, select the displayed instance and click Next. (This installation path is described in Chapter 7, "Installing the Siebel Server.")

For more information about adding Language Packs, see "Siebel Server Installation Requirements" on page 112.

The Installer Path screen appears.

7 Enter the fully qualified path to the installation directory, then click Next.

CAUTION: You *must* install the Siebel Database Server in the same directory in which you installed the Siebel Server (for example, /sea78). Otherwise, the installer will assume you are installing components for a different Siebel Enterprise Server.

If you specified the location of the existing Siebel Server installation, the installer prompts you to select the product that you want to install (Siebel Database Server in this case).

8 Select from the following options, then click Next:

■ Select the Siebel Database Server for installation and configuration. (This procedure assumes that you have already installed the Siebel Gateway Name Server, and that you have already installed the Siebel Server on the same machine where you will install the Siebel Database Server: these options are unavailable.)

■ Alternatively, depending on what products you may already have installed, you can install:

❑ Siebel Server and Siebel Database Server. For this installation process, you perform a combination of tasks in Chapter 7, "Installing the Siebel Server," and tasks in this chapter.

❑ Siebel Gateway Name Server, Siebel Server, and Siebel Database Server. For this installation process, you perform a combination of tasks described in Chapter 6, "Installing the Siebel Gateway Name Server," tasks in Chapter 7, "Installing the Siebel Server," and tasks in this chapter. (In general, this installation approach is suitable only for testing purposes.)

NOTE: If you install multiple components at once, the installer and the Siebel Software Configuration Wizard prompt you for the installation parameters of each component individually, in the sequence required.

The installer prompts you to select the type of installation setup you prefer.

9 Choose the type of Siebel Database Server installation to execute from the following options, then click Next:

■ **Typical.** Installs all Siebel Database Server components.

■ **Compact.** Not supported. There is no compact installation option for the Siebel Database Server.

■ **Custom.** Lets you customize your installation by choosing the specific components you want to install.

CAUTION: If you select Custom installation, make sure that you also select *Sample Database support* the first time you install the software. When Sample Database support is installed, additional files are copied to a directory in the Siebel File System after configuration. These files are required to read attachments. For more information, see "Populating the Siebel File System" on page 170.

For a list of the installable components, see the following table.

Installation Setup	Products
Typical or Custom	The following components are installed with a Typical installation, and can be selected individually in a Custom installation: ■ Sample Database support—File attachments for Siebel seed data. ■ Oracle Database Enterprise Edition—Database scripts for the Siebel Database on Oracle. See also "Guidelines for Creating Oracle Database Objects" on page 60. ■ IBM DB2 UDB for UNIX and Windows—Database scripts for the Siebel Database on DB2 UDB for UNIX and Windows. See also "Guidelines for Creating DB2 UDB Database Objects" on page 51. ■ IBM DB2 UDB for z/OS—Database scripts for the Siebel Database on DB2 UDB for z/OS. (This platform is described in *Implementing Siebel Business Applications on DB2 UDB for z/OS.*)

■ If you chose the Custom installation type, proceed to Step 10 on page 152.

■ If you chose the Typical installation type, proceed to Step 11 on page 152.

10 If you chose Custom, select the database platform components that you want to install, as described in the table in Step 9 on page 151, and click Next.

The installer displays the location into which it will install the Siebel Database Server and any other servers you have elected to install, and also the disk space required for the software you are installing.

11 Click Next to copy the files for the selected products into the installation location. Alternatively, to change any settings, click Back, adjust your selections, and click Next to return to this screen.

The installer proceeds to install the specified files.

A message appears, stating that language files are being installed.

After all server files specified have been installed, the installer displays the message:

`The InstallShield Wizard has successfully installed the Siebel Enterprise Server. Click Finish to exit the Wizard.`

12 Click Finish.

13 Proceed to .

If you would like to view events that occurred during the installation, you can access the log generated by the installer at $*SIEBEL_ROOT*/log.txt.

Reviewing the Installation for the Siebel Database Server

Review the directory structure created by the Siebel Database Server installation, as illustrated in this section. The example that follows results from performing a Custom installation.

The Siebel Database Server is installed in the *DBSRVR_ROOT* directory within the Siebel Server root directory you specified during the installation; by default, it is installed in /sea78/dbsrvr. The *DBSRVR_ROOT* directory contains the following subdirectories:

bin. Contains files for internal use.

common. Contains database platform-independent files.

db_server **(oracle or db2udb).** Contains scripts specific to your database, including upgrade scripts for previous versions of Siebel applications.

> **siebproc (DB2 UDB only).** Contains User Defined Functions (UDFs) and stored procedures for DB2 UDB for UNIX and Windows, by OS platform. See also .
>
> > **aix.** UDFs and stored procedures for DB2 UDB on AIX.
> >
> > **hpux.** UDFs and stored procedures for DB2 UDB on HP-UX.
> >
> > **linux.** UDFs and stored procedures for DB2 UDB on Linux.
> >
> > **solaris.** UDFs and stored procedures for DB2 UDB on Solaris.
> >
> > **win32.** UDFs and stored procedures for DB2 UDB on Windows.
>
> **sqlproc (DB2 UDB only).** Contains subdirectories that contain the SAR (stored procedure archive) files for all supported OS platforms installed on the server.
>
> > **aix.** Stored procedures for DB2 UDB on AIX.
> >
> > **hpux.** Stored procedures for DB2 UDB on HP-UX.
> >
> > **linux.** Stored procedures for DB2 UDB on Linux.
> >
> > **solaris.** Stored procedures for DB2 UDB on Solaris.
> >
> > **win32.** Stored procedures for DB2 UDB on Windows.
>
> **upgrade.** Directories containing files to enable upgrading from specific versions of Siebel Business Applications that are supported for upgrade to the current release.

language. Contains language- and database-specific files for the ancestor repository and
supporting files. For example, ENU would contain language-specific U.S. English files, and DEU would
contain German-language-specific files.

files. This directory contains sample file attachments and is created if you install Sample File
Attachments. These files should be copied to the appropriate subdirectory of the Siebel File System.
See .

Setting Up Your Environment to Support Global Time Zone

Global deployments typically span multiple time zones, making it difficult to manage time-sensitive
information that must be exchanged among customers and employees working around the world.
You can use the Global Time Zone feature to monitor the transfer of tasks between sites in different
time zones.

The Global Time Zone feature converts and stores date and time data, using the Universal Time
Coordinated (UTC) standard, which is equivalent to Greenwich Mean Time, but without daylight
savings time.

You also need to make sure that time on all your machines are in sync by using a common NNTP
server for time synchronization.

If you intend to operate your deployment with the Global Time Zone feature enabled, you must also
set the operating system of your database servers to UTC time, or its equivalent. It is recommended
that you change the time zone for the hosted application and not for the entire server. To change the
operating system time, consult the vendor documentation for your operating system.

For more information on enabling Global Time Zone, see the *Global Deployment Guide*.

For restrictions on installing and configuring UTC on DB2 UDB for z/OS, see *Implementing Siebel
Business Applications on DB2 UDB for z/OS*.

NOTE: The Global Time Zone parameter (Universal Time Coordinated system preference) is enabled
(set to TRUE) by default. If you do not want to enable the Global Time Zone feature, you must reset
this system preference to FALSE by navigating to Administration - Application > System Preferences.

Creating Table Owner and Administrator Accounts

Create the table owner and administrator accounts according to the guidelines provided for each database platform in this section.

NOTE: For each database platform described in this section, if you are planning to use Siebel Marketing, also grant drop table, drop index, create table, and create index rights at the database level within the OLTP schema to the table owner or the database user ID used for Siebel Marketing. For more information, see the *Siebel Marketing Installation and Administration Guide*.

CAUTION: It is strongly recommended not to change the name of the Siebel administrator account, SADMIN. This account must be created for you to log onto Siebel Business Applications as the Siebel administrator. For information about changing the password for this account, see the *Security Guide for Siebel Business Applications*.

DB2 UDB

Your database administrator must manually create the Siebel table owner account (default: SIEBEL), the Siebel administrator account (default: SADMIN), and the sse_role group. The database administrator must then add the Siebel administrator account to the sse_role group at the operating system level.

You can add users to the installation group sse_role group and permit them to use administrative commands to start, stop or otherwise administer the Siebel Server or components. However, you must change the permissions on the directory to enable write access, using the following command:

    chmod -R 775 $*SIEBEL_ROOT*

NOTE: On Solaris, the sse_role group cannot be created using the admintool, due to the use of an underscore in the name. Instead, use the command groupadd sse_role to create the sse_role group and ignore the warning: groupadd: sse_role name should be all lower case or numeric.

After your database is created and before it is configured, execute the grantusr.sql script against your database server to grant the appropriate privileges to these users. The grantusr.sql script must be run before you configure the Siebel Database. The grantusr.sql script is located in the $*SIEBEL_ROOT*/dbsrvr/db2udb subdirectory.

Your database administrator should review and run this script, which performs the following functions:

■ Grants the appropriate permissions to the Siebel table owner account that will own all the database objects for your Siebel deployment.

■ Creates a role (sse_role) with create session privileges.

You cannot create the LDAPUSER account by running grantusr.sql. This account must belong to the sse_role group and be created by the database administrator or the UNIX network administrator, as appropriate. For more information about LDAP security adapter authentication, see the *Security Guide for Siebel Business Applications*.

To run the grantusr.sql script on DB2 UDB

1 Run the grantusr.sql script, using an account with DBA privileges.

The usual DB2 System Administration account will be called db2inst1 for this procedure.

2 Enter the following commands:

db2 connect to *DB2database_alias* user *instance_owner_username* using *password*

db2 -vf $*SIEBEL_ROOT*/dbsrvr/db2udb/grantusr.sql

where:

■ *DB2database_alias* = The DB2 alias you use

■ *instance_owner_username* = The login ID of the instance owner

■ *password* = The password for the database instance (length and allowable characters depend on the rules of your underlying RDBMS platform)

■ $*SIEBEL_ROOT* = The full path to the Siebel root directory

The script prompts you for the default table space in which your Siebel objects are to be created.

3 Enter the table space name you recorded in the copy you made of Appendix A, "Deployment Planning Worksheet."

Oracle

Before configuring the Siebel Database, your database administrator must review and modify (if necessary) the grantusr.sql script. The administrator must then execute the grantusr.sql script against your Siebel Database to create the Siebel table owner (default: SIEBEL), Siebel administrator account (default: SADMIN), LDAPUSER account, and the role sse_role, and grant them the appropriate privileges.

Before executing grantusr.sql, the database administrator should copy the following command in the script, so it is defined once for each table space (for data or indexes) in your Siebel implementation:

alter user SIEBEL quota unlimited on *table_space_name*;

If necessary, the quota value can be adjusted to an appropriate value for each corresponding table space.

The grantusr.sql script is located in the $*SIEBEL_ROOT*/dbsrvr/oracle subdirectory.

The grantusr.sql script performs the following functions:

■ Creates the role sse_role and grants create session privilege to this role.

■ Creates the user SIEBEL (the Siebel table owner) and grants other appropriate privileges to SIEBEL.

■ Creates the users SADMIN (the Siebel administrator) and LDAPUSER and grants the role sse_role to them.

The default user name and password for the logon are listed in the grantusr.sql script. If you want another logon, edit the grantusr.sql script and change all the references to your preferred name. However, keep in mind that the length and allowable characters for the login ID and password depend on the rules of your underlying RDBMS platform. For instructions, see your Oracle documentation.

To run the grantusr.sql script on Oracle

1 Run the grantusr.sql script from SQL*Plus, using an account with DBA privileges, and using the following command:

   @/$*SIEBEL_ROOT*/dbsrvr/oracle/grantusr.sql

   NOTE: You must specify the full path to the file above.

2 Type the table space name listed in

Installing the Stored Procedures and User-Defined Functions on DB2 UDB

On DB2 UDB, after installing the Siebel Database Server, you must copy stored procedures and user-defined functions (UDFs) from the Siebel Database Server installation to the DB2 UDB database server.

Any method that transfers the necessary files to the correct location on the database server is acceptable.

To copy the stored procedure code, complete the procedure that follows. Use the steps appropriate to the operating systems for the Siebel Database Server and the RDBMS.

For information on how to perform basic DB2 UDB tasks, see IBM's *Quick Beginnings* guide.

To copy and install the stored procedures

1 Log on to the Siebel Server machine on which you installed the Siebel Database Server

2 Navigate to the following subdirectory in the Siebel Database Server installation directory:

   DBSRVR_ROOT/db2udb/siebproc/*DBSRVR_OS*

   where:

   ■ *DBSRVR_ROOT* = The Siebel Database Server component subdirectory of your Siebel Business Applications installation directory ($*SIEBEL_ROOT*/dbsrvr)

   ■ *DBSRVR_OS* = The operating system your database server (RDBMS) runs on, such as AIX, HPUX, SOLARIS, or LINUX.

3 Copy the file siebproc to the function subdirectory within the DB2 UDB instance directory on the RDBMS machine where DB2 UDB is installed.

For example, on AIX, this location might be $INST_HOME/sqllib/function.

Permissions for si ebproc should be -rw-r---- (read-write for the owner, read for the group, and neither read nor write for all others). The owner of the file should be the instance owner, and the group should be the group to which the instance owner belongs.

NOTE: If you are deploying with DB2 UDB v8 64-bit, then you need to copy the siebproc64 library file to the sqllib/function directory and rename it to siebproc.

4 Proceed to "Configuring the Siebel Database on the RDBMS" on page 158.

Configuring the Siebel Database on the RDBMS

Configuring the Siebel Database requires these tasks:

■ "Installing the Siebel Database Components" on page 158

■ "Reviewing the Log Files for Siebel Database Installation" on page 163

■ "Importing the Siebel Repository for the Siebel Database" on page 165

■ "Reviewing the Log Files for Repository Import for the Siebel Database" on page 168

You will perform configuration tasks using the Database Server Configuration Wizard, which is available on the machine on which you installed the Siebel Database Server.

CAUTION: *In an upgrade environment, you install the Siebel Database Server on the Siebel Server, following the procedure in* "Installing the Siebel Database Server on the Siebel Server" on page 149, *but you do not perform any of the other tasks mentioned in this chapter.* For more information, see "About Installing in Upgrade Environments" on page 16.

Installing the Siebel Database Components

When you choose Install Database from the Siebel Database Operation screen in the Database Server Configuration Wizard, the utility performs several tasks within the database instance you created in Chapter 3, "Configuring the RDBMS."

■ Creates the Siebel schema (tables and indexes) in a specified table space.

■ Inserts Siebel seed data specific to your database, and installs views, packages, and procedures for your database.

■ Sets system preferences.

Some steps in the procedure in this topic pertain to adding a language to an existing Siebel Database, also using the Database Server Configuration Wizard. Adding a language to an existing Siebel Database installs seed data to support that language.

In order to add a new language to previously installed Siebel applications, you must have installed its Language Pack on the Siebel Server using the Siebel Enterprise Server installer.

After you have added a language to the Siebel Database, your seed data is multilingual. You must enable the multilingual list of values (MLOV) capability for Siebel Business Applications. For more information, see *Configuring Siebel Business Applications* and the *Global Deployment Guide*. See also any applicable documents on this issue on Siebel SupportWeb.

For a list of languages supported by Siebel Business Applications in this release, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

To install Siebel Database components

1 Navigate to $SIEBEL_HOME/bin and source environment variables, using one of the following commands, depending on the type of shell you use:

Bourne or Korn shell

> . ./siebenv.sh

> **TIP:** Make sure there is a space between the initial period and ./siebenv.sh.

C shell

> source siebenv.csh

where:

- ■ $SIEBEL_HOME = The location of the Siebel Server root directory, such as /export/home/siebel/siebsrvr.

2 Verify whether the values for SIEBEL_ROOT and LANGUAGE are correctly set or are empty by entering:

> env

If the variables are incorrect or missing, reset them using one of the following commands, as appropriate to the shell you use.

For example, the SIEBEL_ROOT value might resemble /export/home/siebel/siebsrvr, while the value for LANGUAGE might be ENU, FRA, JPN, or CHS (or another language code).

Bourne or Korn shell

> export SIEBEL_ROOT=*New_Value*

> export LANGUAGE=*New_Value*

C shell

> setenv SIEBEL_ROOT *New_Value*

> setenv LANGUAGE *New_Value*

3 Navigate to $SIEBEL_ROOT/bin and run the following script:

```
dbsrvr_config.ksh
```

This script launches the Database Server Configuration Wizard.

4 Confirm whether the displayed settings for the SIEBEL_ROOT and LANGUAGE environment variables are correct (as discussed in) by entering either Y or N.

If either the SIEBEL_ROOT value or the LANGUAGE value, which is the language in which you are running the wizard, is not set or is incorrect, you must correct them before proceeding.

The Configuration Wizard validates the existence of the $SIEBEL_ROOT directory.

5 Specify a different path to your Siebel Server root directory, or press Enter to accept the current default setting (for example, /export/home/siebel/siebsrvr).

The Configuration Wizard then prompts you for the path to the Siebel Database Server root directory.

6 Specify the path to your Siebel Database Server root directory, or press Enter to accept the current default setting (for example, /export/home/siebel/dbsrvr).

7 Select the appropriate RDBMS for your installation by entering the respective number from the list of supported database platforms displayed:

```
Select the RDBMS Platform:

1- IBM DB2 UDB for Windows and UNIX
2- IBM DB2 UDB for z/OS
3- Oracle Database Enterprise Edition
```

8 Enter 1 to select the Install Database option from the Siebel Database Operation menu.

```
Select the Siebel Database Operation

1- Install Database
2- Upgrade Database
3- Import/Export Repository
4- Migrate Repository
5- Run Database Utilities
```

9 On the next screen, enter Y if you ran grantusr.sql to set up your table owner and administrator accounts, or enter N to exit the Database Server Configuration Wizard to run this script.

NOTE: These accounts must be in place or you will not be able to complete installation of your tables, indexes, and seed data.

10 If you elected to proceed, enter 1 to select Install Siebel Database from the Installation Options menu.

```
Select one of the following options:

1- Install Siebel Database
2- Add a language to an existing Siebel Database
```

The Install Siebel Database option creates the Siebel schema and inserts seed data at the end of the configuration session.

(If you instead selected Add a language to an existing Siebel Database, proceed to , and specify the base language for the Siebel Database.)

11 On the Database Encoding screen, enter the number that corresponds to the database encoding value for your database:

```
1- Unicode
2- Non-Unicode
```

CAUTION: Choose the correct option for your database to prevent installation of the wrong data types. The database will not be able to create Unicode data types on a non-Unicode page setting, so check this setting carefully before choosing the option.

If you are installing a new Siebel Database, proceed to .

12 On the Base Language screen, specify which language is as the primary (base) language for the Siebel Database.

The primary (base) language is the language in which you already installed the Siebel Database (the first installed language). This screen appears only if you are adding a language to an existing Siebel Database.

The languages listed in this screen are those you previously installed on the Siebel Server.

13 On the Language Selection screen, enter the number corresponding to the language in which you want to run your database (for an install database operation), or to the language you want to add (for an add language operation).

For an install database operation, the language you select will be the primary (base) language for your database (the first language installed).

The languages listed in this screen are those you previously installed on the Siebel Server.

For an install database operation, the language you select will be the primary (base) language for your database (the first language installed).

14 On the ODBC Data Source screen, specify the ODBC data source name; for example, siebsrvr_sieb78. Then press Enter.

You can find the ODBC data source name under the [ODBC Data Sources] section of the .odbc.ini file, located in the $*SIEBEL_ROOT*/sys directory.

For more information about the ODBC data source, see .

The Database User Name screen appears.

15 Enter the user name and password for the Siebel administrator for your database; for example, SADMIN and SADMIN (Oracle) or SADMIN and db2 (DB2 UDB).

The Database Table Owner screen appears.

16 Enter the database table owner name and password; for example, ora*** and ora*** or siebel and db2.

The Database Server OS screen appears.

17 **(DB2 UDB for UNIX and Windows only)** On the Database Server OS screen, select the platform on which your database server runs, and press Enter.

```
1- Windows
2- Solaris
3- AIX
4- HP-UX
5- Linux
```

18 **(DB2 UDB only)** On the Database Index screen, enter the name of your index table space.

19 **(DB2 UDB only)** Enter the name of your 4-KB table space.

20 **(DB2 UDB only)** Enter the name of your 16-KB table space.

21 **(DB2 UDB only)** Enter the name of your 32-KB table space.

22 **(Oracle only)** On the Database Index screen, enter the name of your index table space; for example, INDEX01.

23 **(Oracle only)** Enter the name of your table space; for example, DATA01.

The Oracle Parallel Index screen appears.

24 **(Oracle only)** In the Oracle Parallel Index screen, specify the appropriate environment for your installation:

```
1. I am not running with Parallel Indexing On
2. I am running with Parallel Indexing On
```

If you have a single-CPU environment, choose the first option. If you have a multiple-CPU environment, choose the first or second option, depending on whether you are running with parallel indexing on.

The Common Parameters screen appears:

```
Siebel Log Process

(Default: install)
Press Enter for default
```

25 To accept the default log process (*install* for Install Database or *install_lang* for Add language) as the name of the logging directory under siebsrvr/log, press Enter. Or, specify a different name for the logging directory, then press Enter.

The List of Parameters Used screen appears, which shows the settings made during the session.

NOTE: Optionally, you can press Ctrl-C to cancel the Database Server Configuration Wizard session, then restart dbsrvr_config.ksh and reconfigure with different values.

26 You are prompted whether to run the Siebel Upgrade Wizard now. When you have verified the configuration values, do one of the following in order to generate SQL:

■ To run the Upgrade Wizard and execute the SQL after it is generated, type 1 and press Enter. The SQL is generated, and then executed in the Siebel Upgrade Wizard, after you complete this procedure.

■ To run the Upgrade Wizard and execute the SQL later, type 2 and press Enter. The SQL is generated, but not executed, after you complete this procedure. In this case, you will need to run the Upgrade Wizard manually at a later time in order to execute the generated SQL.

CAUTION: It is strongly recommended *not* to run the Upgrade Wizard and execute generated SQL at this time. Both new customers and upgrade customers *must* run this wizard to apply the configuration, whether you run it now or run it later using the srvrupgwiz command. Before running the Upgrade Wizard, check the *Release Notes* on Siebel SupportWeb for the current release. If this document describes any tasks you must perform to modify the generated SQL files, modify the generated SQL as necessary after you complete this procedure. Then run the Upgrade Wizard using the srvrupgwiz command to apply the configuration.

The command line to apply the configuration later is:

> *SIEBEL_ROOT*/siebsrvr/bin/srvrupgwiz /m master_*operation*.ucf

where, for this procedure, *operation* may be *install* or *install_lang*.

Reviewing the Log Files for Siebel Database Installation

Installing Siebel Database components on the RDBMS creates several log files within the $*SIEBEL_ROOT*/log subdirectory. You must review the files in this subdirectory for any errors.

For example, log files created may be named srvrupgwiz1.log (the most recently created), srvrupgwiz1_01.log, srvrupgwiz1_02.log, and so.

NOTE: For information about reviewing log files using the logparse utility, see the *Upgrade Guide*.

Some other files generated for selected supported RDBMS are listed below.

DB2 UDB. For DB2 UDB, the following log files are also generated when you create tables, indexes, and seed data:

```
ddl_ctl.log
dataimp_prim.log
dataimp_prim_lang.log
db2ddl.log
siebproc.log
seeddb2.log
seedver.log
seedssa.log
ddlview.log
ddlview_sia.log (for SIA)
grantstat.log
updatestats.log
loadstats.log
set_utc_on.log
```

Oracle. For Oracle, the following log files are also generated when you create tables, indexes, and seed data:

```
ddl_ctl.log
dataimp_prim.log
dataimp_prim_lang.log
ddlseq.log
ddlora.log
ddlview.log
ddlview_sia.log (for SIA)
seedssa.log
seedver.log
pkgseq.log
pkgldel.log
seedora.log
pkgvis.log
trgreset.log
ifstrg.log
ifindxstrg.log
set_utc_on.log
month_fn.log
```

Acceptable Errors for Siebel Database Installation

The log files may include errors that are expected and benign. Compare any error messages found in the log files to the sample error messages in the errors.txt file, which is located in the installation subdirectory for your database platform, for example, oracle. If a log file is not listed in the errors.txt file, then there are no acceptable error messages for that log file. No further action is required if the log files contain errors listed in the errors.txt file.

NOTE: Only one of each type of error occurring in a particular log file appears in the errors.txt file.

If you find errors not listed in the errors.txt file, correct the condition that caused the errors, and rerun the Upgrade Wizard.The wizard will restart from the point where it left off.

Do not review only the error numbers, because these may have changed following installation of a new driver version. Instead, compare the actual error descriptions to find out which are acceptable errors for this platform.

CAUTION: Although other errors are rarely encountered, this review is critical. Certain errors, such as a failure to create indexes, may result in performance problems or anomalous behavior in Siebel Business Applications.

You can view a log summary generated using the logparse utility. For more information, see the *Upgrade Guide*.

Troubleshooting Siebel Database Installation

Typically, problems during database installation result from insufficient storage space having been allocated, or from the installer having improper user privileges.

Providing a Rollback Segment on Oracle

To avoid certain types of errors after importing the repository, make sure that your database administrator provides only one large rollback segment online in your Oracle database.

Importing the Siebel Repository for the Siebel Database

As a final step, you must import the Siebel Repository, using the Database Server Configuration Wizard. This task populates all the repository tables in the Siebel Database with the new Siebel Business Applications application objects.

Regardless of how many Siebel Business Applications you are using (for example, Siebel Call Center, Siebel Sales, Siebel Service, and Siebel Marketing), you will load the repository tables only once for each language.

NOTE: When you import data into the Siebel Repository tables, a commit is performed once for each table into which repository data is imported. Alternatively, the commit frequency can be set to a specified number of rows by including the command-line option /h *num_rows_per_commit* when the repimexp utility is invoked.

Some steps in the procedure in this topic pertain to adding a language to an existing repository, also using the Database Server Configuration Wizard. By adding a new language to a repository, you populate rows of localized user interface strings for repository objects, which allows Siebel Business Applications to display the UI in the new language.

In order to add a new language to an existing repository, you must have installed its Language Pack on the Siebel Server using the Siebel Enterprise Server installer. Also, you must have added the language to the Siebel Database. For more information, see "Installing the Siebel Database Components" on page 158.

To import the Siebel Repository

1 Navigate to $*SIEBEL_HOME*/bin and source environment variables, using one of the following commands, depending on the type of shell you use:

Bourne or Korn shell

    . ./siebenv.sh

> **TIP:** Make sure there is a space between the initial period and ./siebenv.sh.

C shell

    source siebenv.csh

where:

◼ $*SIEBEL_HOME* = The location of the Siebel Server root directory

2   Verify whether the SIEBEL_ROOT and LANGUAGE variables are correctly set or are empty by entering:

   env

If the variables are incorrect or missing, reset them using one of the following commands, as appropriate to the shell you use:

Bourne or Korn shell

   export SIEBEL_ROOT=*New_Value*

   export LANGUAGE=*New_Value*

C shell

   setenv SIEBEL_ROOT *New_Value*

   setenv LANGUAGE *New_Value*

3   Navigate to $*SIEBEL_ROOT*/bin and run the following script:

   dbsrvr_config.ksh

This script launches the Database Server Configuration Wizard.

NOTE: You must have read, write, and execute permission to run this script successfully.

The script begins by displaying the current settings for the SIEBEL_ROOT and LANGUAGE variables and prompts you as to whether these settings are correct.

4   Confirm whether or not the settings are correct by entering either Y or N.

NOTE: If either the SIEBEL_ROOT or LANGUAGE value is not set or is incorrect, you must correct them before proceeding.

5   Specify the path of your Siebel Server root directory, or accept the default by pressing Enter.

6   Specify the path of your Siebel Database Server root directory, or accept the default by pressing Enter.

The script displays the RDBMS Platform screen.

7   Enter the appropriate number for the RDBMS for your installation and press Enter.

   Select the RDBMS Platform:

   1- IBM DB2 UDB for UNIX and Windows
   2- IBM DB2 UDB for z/OS
   3- Oracle Database Enterprise Edition

8   On the Siebel Database Operation screen, type 3 and press Enter to select Import/Export Repository.

   Select the Siebel Database Operation

```
1- Install Database
2- Upgrade Database
3- Import/Export Repository
4- Migrate Repository
5- Run Database Utilities
```

9 On the Repository Operations screen, type 1 to select Import Repository, or type 2 to add a language to the repository. Press Enter.

```
Select one of the following options:

1- Import Repository
2- Add language to an existing Repository
3- Export Repository
```

10 On the Import Repository screen, enter 1 to specify that you want to import the Siebel repository. Press Enter.

```
Specify your import repository option:

1- Import Siebel Repository
2- Import Custom Repository
```

11 On the Language Selection screen, enter the number corresponding to the language in which you want to run your database (for an import repository operation), or to the language you want to add (for an add language operation).

For an import repository operation, the language you select should be the primary (base) language for your database (the first language installed in "Importing the Siebel Repository for the Siebel Database" on page 165).

The languages listed in this screen are those you previously installed on the Siebel Server.

NOTE: Before you install Language Packs, see the information about code pages in "Planning RDBMS Installation and Configuration" on page 22.

12 Enter the ODBC data source name; for example, siebsrvr_sieb78.

For more information about the ODBC data source, see "Planning RDBMS Installation and Configuration" on page 22.

13 Enter the user name password for the Siebel administrator for your database; for example, SADMIN and ORASADMIN.

14 Enter the Oracle database table owner name and password; for example, siebel and orasadmin.

15 Enter the name of your repository or accept the default; for example, Siebel Repository.

16 Enter the name of your repository file name or accept the default; for example, mstrep.dat.

After you have completed your Import Repository specifications, the Configuration Wizard displays the list of configured values and prompts you as to whether you want to launch the Siebel Upgrade Wizard (srvrupgwiz).

17 Enter 1 to confirm your specifications and launch the Upgrade Wizard, or 2 to reject the values and exit the Configuration Wizard.

If you need to change the values you previously entered, rerun the Configuration Wizard by running the dbsrvr_config.ksh script. Rerunning the wizard allows you to reconfigure with different values.

NOTE: If a program or system error occurs and you need to rerun the Siebel Upgrade Wizard, you can do so, starting at the point at which the wizard failed. For details, see the *Upgrade Guide*.

If the upgrade was successful, the Siebel Upgrade Wizard displays a success message when installation is complete.

Reviewing the Log Files for Repository Import for the Siebel Database

The repository import process creates several log files within the $*SIEBEL_ROOT*/log subdirectory. You must review the files in this subdirectory for any errors.

For more information, see .

Acceptable Errors for Repository Import for the Siebel Database

The log files may include errors that are expected and benign. Compare any error messages found in the log files to the sample error messages in the errors.txt file, which is located in the database server platform subdirectory, for example, oracle. If a log file is not listed in the errors.txt file, then there are no acceptable error messages for that log file. No further action is required if the log files contain errors listed in the errors.txt file.

NOTE: Only one of each type of error occurring in a particular log file appears in the errors.txt file.

If you find errors not listed in the errors.txt file, correct the condition that caused the errors, and rerun the Upgrade Wizard.

Do not review only the error numbers, because these may have changed following installation of a new driver version. Instead, compare the actual error descriptions to find out which are acceptable errors for this platform.

CAUTION: Although other errors are rarely encountered, this review is critical. Certain errors, such as a failure to create indexes, may result in performance problems or anomalous behavior in Siebel Business Applications.

Troubleshooting Siebel Repository Import for the Siebel Database

Typical problems that may occur at this stage consist of the following:

■ Importing a repository with the same name as an existing repository.

■ Database runs out of table space pages and cannot allocate new data pages which can be resolved by increasing the table space sizes.

■ **(DB2 UDB only)** Errors regarding the settings for DB2 configuration parameters, such as APP_CTL_HEAP_SZ. These must be reset, in most cases, to higher values, because Siebel Systems' guidelines suggest only minimum values.

The preceding errors should appear in the log files produced by the repository import process.

Postinstallation Tasks for the Siebel Database Server and Siebel Database

Perform the following tasks after you complete your installation of the Siebel Database Server and configuration of the Siebel Database:

■ "Verifying System Preferences and Other Settings for Database Code Page" on page 169

■ "Populating the Siebel File System" on page 170

Verifying System Preferences and Other Settings for Database Code Page

After you complete the installation and configuration of your Siebel Database Server, you must verify system preferences and other settings for the Siebel application that indicate whether you are using Unicode, and indicate the code page you are using.

For more information about code pages, see "Planning RDBMS Installation and Configuration" on page 22 and Chapter 3, "Configuring the RDBMS." See also *System Requirements and Supported Platforms* on Siebel SupportWeb and the *Global Deployment Guide*.

To verify system preferences and other settings

1 Launch Siebel Tools and navigate to Screens > System Administration > System Preferences.

NOTE: The first time you bring up Siebel Tools, the system prompts you to enter a license key number, if you have not done so already. You can find the license key that has been assigned to your site in your license key letter provided with the DVD case or in a Microsoft Word document along with other documents. For detailed information about license keys, see the *Applications Administration Guide*.

2 Look for System Preference Name = Enterprise DB Server Code Page. Verify that the value has been set correctly, based on the value that you selected during installation of the database server components (see "Installing the Siebel Database Components" on page 158). For acceptable values, see Table 19 on page 170.

NOTE: The value of Enterprise DB Server Code Page must be in lowercase, for example, utf-8 or utf-16.

Table 19. Values for Enterprise DB Server Code Page

Value	Language	Database
utf-8[1] (for Unicode)	All	Oracle
utf-16[2] (for Unicode)	All	DB2 UDB
cp932 (or equivalent)	Japanese	Oracle, DB2 UDB
cp1252 (or equivalent)	Western European	All

1. The Oracle database character set may have a different value, although the value entered must be utf-8.

2. Also known as UCS-2, although the value entered must be utf-16.

3 Verify that the column UNICD_DATATYPS_FLG in the table S_APP_VER is set correctly. The flag value must be in uppercase. Table 20 on page 170 lists possible values.

Table 20. Values for UNICD_DATATYPS_FLG Column

Code Page	Database	Value
Non-Unicode code page	All	N
Unicode	Oracle	8
Unicode	DB2 UDB	Y

Populating the Siebel File System

Specific files needed to use the Siebel File System, such as correspondence templates and Siebel Marketing files, are provided with the Siebel Database Server software. A subdirectory called *files* is created when you install the Siebel Database Server.

The Siebel administrator must populate the att directory in the File System with these files after installing the Siebel Database Server, and before running the Siebel Web Client.

To populate the Siebel File System directory

1 Copy the appropriate files from the files subdirectory of the Siebel Database Server software to the att subdirectory of the Siebel File System.

2 Copy the KB.kb file (for Siebel Smart Answer) from the files subdirectory of the Siebel Database Server software to the cms directory within the Siebel File System.

3 Verify that the files are in the correct location.

9 Installing the Siebel Web Server Extension

The chapter is written for system administrators or Webmasters who will install and configure the Siebel Web Server Extension (SWSE) on their Web servers. It includes the following topics:

- "About Siebel Web Server Extension (SWSE)" on page 171
- "Process of Installing and Configuring the SWSE" on page 172
- "SWSE Installation Requirements" on page 172
- "Installing the Web Server" on page 174
- "Installing and Configuring the SWSE" on page 175
- "Postinstallation Tasks for the SWSE" on page 181
- "Troubleshooting SWSE Installation" on page 192

For alternative installation methods, refer to Chapter 5, "Installing in Unattended and Console Modes."

About Siebel Web Server Extension (SWSE)

Siebel Web Server Extension (SWSE) enables communication between Siebel Web Clients and Siebel Servers. Siebel Business Applications are a family of Web-based applications that users access through a standard Web browser. Several components work together to deliver the applications to end users:

- **Siebel Web Client.** The Siebel application client running in the browser on the end user's machine.

- **Web server.** Client Web browsers connect to Web servers to access Siebel applications.

  Supported Web servers and operating systems include Microsoft IIS (on Microsoft Windows), Sun Java System Web Server (on Sun Solaris), IBM HTTP Server (on AIX), and HP Apache Web Server (on HP-UX). Each Web server is covered in the Windows or UNIX version of this book, the *Siebel Installation Guide* for the operating system you are using, according to the Web server OS.

  IBM HTTP Server and HP Apache Web Server are sometimes referred to as *Apache-based Web servers* and share some characteristics.

  For details about Web server platform support, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

- **Siebel Web Server Extension (SWSE).** A plug-in extension that runs within the Web server and that communicates with the Siebel Web Engine (which is part of an Application Object Manager component, such as Call Center Object Manager) on the Siebel Server.

- **Siebel Web Engine.** Part of the Application Object Manager component on the Siebel Server, such as Call Center Object Manager. Provides access to Siebel applications data and logic.

For information on supported hardware, operating system platforms, Web browsers, and Web servers, refer to *System Requirements and Supported Platforms* on Siebel SupportWeb.

Process of Installing and Configuring the SWSE

Installing and configuring Siebel Web Server Extension (SWSE) consists of multiple tasks, which should be performed by the system administrator in the following order:

1 Review requirements for installing the SWSE. See *"SWSE Installation Requirements" on page 172*. See also *"Planning Topologies" on page 20*.

2 Install your desired load-balancing solution, if you are using a third-party load balancer.

For more information, see *"Managing Load Balancing for Siebel Applications" on page 130*. See also the *Siebel System Administration Guide*.

3 Install the Web server. See *"Installing the Web Server" on page 174*.

4 (Optional) Uninstall your existing SWSE. See *"SWSE Installation Requirements" on page 172* and *Chapter 15, "Uninstalling Siebel Applications."*

5 Install the SWSE. See *"Installing and Configuring the SWSE" on page 175*.

6 Complete any appropriate postinstallation tasks. See *"Postinstallation Tasks for the SWSE" on page 181*, which includes topics such as *"Configuring the Web Server" on page 181*.

SWSE Installation Requirements

Before installing the SWSE, review the requirements listed in this section.

CAUTION: Do not install Siebel Business Applications without first reviewing *System Requirements and Supported Platforms* on Siebel SupportWeb.

■ Review the issues described in *"Managing Temporary Disk Space Required by Installers" on page 24*. For example, make sure you have adequate disk space, and make sure the login ID running the installer has write permissions to this directory.

■ You must have installed a supported Web server as identified in *System Requirements and Supported Platforms* on Siebel SupportWeb for the current release.

Make sure that the Web server machine on which you will install the SWSE meets all the hardware and software platform requirements documented in *System Requirements and Supported Platforms* on Siebel SupportWeb.

NOTE: Take note of the port number for the Web server. If you are using a nondefault port number, you will need to modify the httpd.conf file to reflect the correct port number. For details, see *"Editing the httpd.conf File on IBM HTTP Server and HP Apache Web Server" on page 174*.

■ You must have installed all key Siebel Enterprise Server components, including the Siebel Gateway Name Server, at least one Siebel Server, and the Siebel Database Server. Application Object Manager components must be enabled for the Siebel applications you purchased.

   For information about enabling server components, see the *Siebel System Administration Guide*.

   NOTE: Wait to install additional Siebel Servers until after you have completed installation of the SWSE software and verified the connection from the Web server to the initial Siebel Server.

■ You can deploy multiple Language Packs on one Web server and one SWSE instance. The Siebel Server and the Web server do not need to be operated in the same language. However, your Siebel Server, your Web server, and all other server components must use the same character set. For more information, see the *Global Deployment Guide*.

■ At least one SWSE is required for each Siebel Enterprise Server.

■ If you will be using Siebel load balancing, you must generate the load-balancing configuration file (lbconfig.txt) before installing the SWSE. The SWSE Configuration Wizard updates the load-balancing virtual host definitions and routing URLs in this file.

   For more information, see “Managing Load Balancing for Siebel Applications” on page 130. See also the *Siebel System Administration Guide*.

■ If you will *not* require side-by-side installations of the same or different versions of SWSE on the same machine, it is generally advisable to uninstall a previous version of SWSE before installing the current version. Doing so ensures that virtual directories you create for your applications will not conflict with those for prior versions.

■ If you *will* require side-by-side installations of the same or different versions of SWSE on the same machine, which may be helpful in some upgrade scenarios or for development or testing purposes, you must read Technical Note 456 on Siebel SupportWeb before you install SWSE. See also “Installing Multiple Instances of Siebel Business Applications” on page 25.

   Installing multiple instances of SWSE on the same machine (sometimes referred to as *binary coexistence*) requires taking steps to ensure unique virtual directory names for your applications. You must create the virtual directories, following the processes described in Technical Note 456, *before* you install the new instance of SWSE.

   In addition, note the following operating system and Web server platform considerations:

   ■ **Sun Solaris.** You can install multiple instances (virtual server instances) of the Sun Java System Web Server on the same machine, and install different instances of SWSE to run against each Web server instance. Each instance uses a different port.

   ■ **UNIX platforms using Apache-based Web servers.** You can install multiple instances of the Web server on the same machine. However, you can install only a single instance of SWSE on this machine.

■ **Microsoft platforms using IIS.** You can install only a single instance of the Web server on the same machine. You can install different instances of SWSE on this machine, but you cannot run multiple instances of SWSE simultaneously, unless you configure them to run in separate memory spaces.

For details, see Technical Note 456 on Siebel SupportWeb.

NOTE: Scalability and performance implications should be taken into consideration when running multiple instances of SWSE on a single Web server.

Installing the Web Server

Before installing the SWSE, you need to install, configure, and start the supported Web server software on the designated machine.

For the best performance and scalability, put the Web server on a dedicated machine.

SWSE Installation Directory Permissions

Make sure that the user running the SWSE plug-in has read, write, and execute permissions on the *SWSE_ROOT* directory and its subdirectories (where *SWSE_ROOT* is the directory in which the SWSE is installed).

Adding Domain Name for Sun Java System Web Server

For Sun Java System Web Server (formerly Sun ONE Web Server) installations, add the domain name to either /etc/hosts or resolve.conf.

Editing the httpd.conf File on IBM HTTP Server and HP Apache Web Server

IBM HTTP Server and HP Apache Web Server may ship with the default character encoding setting AddDefaultCharset ISO-8859-1 in the httpd.conf configuration file. For nonresident user interface languages, this setting makes some static content, such as launch pop-ups, About boxes, and help pages display incorrectly. Complete the procedure that follows to reset this for non-Western languages.

To specify a different character encoding setting

1 If you are using IBM HTTP Server, navigate to the location of the httpd.conf file, usually located under /usr/IBMIHS/conf. If you are using HP Apache Web Server, navigate to /opt/hpws/apache.

2 Open httpd.conf with a text editor, such as vi.

3 Locate the line AddDefaultCharset ISO-8859-1 and comment it out by placing a number sign (#) character at the beginning of the line.

4 Save the file.

5 Restart the server.

If a different port is specified for SWSE, you also need to make the following modifications in the httpd.conf file.

To specify a different port number for SWSE

■ Modify the following two lines in the httpd.conf file:

> *Listen*: *PortNumber*

> *ServerName*: *PortNumber*

where:

■ *Listen* = IP Address of the Web server machine

■ *ServerName* = Machine name

■ *PortNumber* = Port number

For example:

72.20.167.154:16131

sdch70a012.siebel.com:16131

Finding the Web Server Listening Port Number on Sun Java System Web Server

During SWSE installation, you are prompted to provide the listening port number for your Web server. You can find this number using the following procedure.

To find the Web server listening port number on Sun Java System Web Server

1 Open the server.xml file located under the config subdirectory of your Web server instance.

2 Locate the line port=*port_number*:

where:

■ *port_number* = A number for your listening port

Installing and Configuring the SWSE

This topic describes provides instructions for installing and configuring the SWSE on your Web server machine.

The installation program sets up the Siebel directory structures, copies required files and components to the target disk, and configures the host environment.

To prevent installation problems related to permissions, the user who installs the SWSE should be the same user or have the same permissions as the user who installed the Web server instance.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install and configure the SWSE under UNIX

1 Install or create an instance of the Web server (for Sun Java System Web Server, you can instantiate a virtual Web server on existing installed software), and record the port number at which it is listening.

2 (Optional) Uninstall your existing SWSE. For more information, see "SWSE Installation Requirements" on page 172.

3 Open a new shell and navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

For example, for Solaris, navigate to *Siebel_Image*/Solaris/Server/ Siebel_Web_Server_Extension.

where:

■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as /Siebel_Install_Image/7.8.2.0.

4 Open a new shell and unset any Siebel environment variables.

5 Verify the directories and permissions to those directories into which you will install the product. You must have read, write, and execute permission.

NOTE: To install the SWSE, you must install using a user account that can modify the files appropriate for your Web server: Sun Java System Web Server, IBM HTTP Server, or HP Apache Web Server.

6 To start the SWSE installation process, enter the following command. Optionally, append any flags described in "Additional Flags for Installation Commands" on page 95.

./setup*UNIX_OS*

where

UNIX_OS = Your operating system (sol, aix, or hpux)

The screen Welcome to the InstallShield Wizard for Siebel Web Server appears. (*Siebel Web Server* is another term for Siebel Web Server Extension.)

7 Click Next.

If a previously installed instance of SWSE of the same version was found on the same machine, the installer displays the message that an existing installation has been found. Otherwise, go to Step 9 on page 177.

8 Depending on whether you are installing your SWSE files for the first time or adding a new language to an existing instance, take the appropriate action, and then click Next:

■ To install a new instance of the SWSE software, select None (the default) and click Next. The Installer Path screen appears.

■ To install a new language in an existing instance, select the displayed instance and click Next. Proceed to Step 10 on page 177.

For additional information about installing multiple Language Packs, see "Siebel Server Installation Requirements" on page 112.

9 Confirm the default installation directory or enter a different fully qualified path to the desired installation directory, and click Next.

The default SWSE installation directory is /siebel.

CAUTION: Do not specify the Web server installation directory as the directory in which to install SWSE.

The Installer Language Selection screen appears.

10 Choose the language or languages to be installed and click Next.

All servers are installed with at least one primary (base) language. Additional languages can be installed at a later date, if desired. For more information, see the *Global Deployment Guide*.

When installing languages at a later date, you must also reinstall any patch releases that were previously installed.

NOTE: Before you install Language Packs, see the information about code pages in "Planning RDBMS Installation and Configuration" on page 22.

The installer displays the location into which it will install the SWSE, and also the disk space required for the software you are installing.

11 Click Next to copy the files for the current product into the installation location. Alternatively, to change any settings, click Back, adjust your selections, and click Next to return to this screen.

The Installation Progress screen appears, and the installer creates the uninstaller folder.

■ If you are installing more than one language, the Primary Language screen appears. Proceed to Step 12 on page 177.

■ If you are installing only one language, the Web Server Root Directory screen appears. Proceed to Step 13 on page 178.

12 Select the primary language for this installation and click Next.

The installer proceeds to install the specified files.

A message appears, stating that language files are being installed.

When installation of all the language files is completed, the Web Server Root Directory screen appears.

13 Select the root directory for the Web server and click Next.

   NOTE: After you click Browse, click once to select a directory. (Double-clicking adds the directory name twice.)

   The Load Balancing Configuration screen appears (in the SWSE Configuration Wizard).

14 Select the desired load-balancing method for your environment and click Next.

   ■ If you select Single Siebel Server in the Enterprise, proceed to Step 15 on page 178.

   ■ If you select Use a Third Party Load Balancer, proceed to Step 16 on page 178.

   ■ If you select Use Siebel Load Balancing, proceed to Step 17 on page 178.

   For more information, see "Managing Load Balancing for Siebel Applications" on page 130. See also the *Siebel System Administration Guide*.

15 Enter Hostname for the Siebel Server and the port number (default 2321) for the SCBroker (Siebel Connection Broker) component. Click Next and proceed to Step 18 on page 178.

   NOTE: This port is used for all communications between the Web server and the Siebel Server. Make sure the port you specify for SCBroker is not occupied by any other applications, other Siebel components (such as Siebel Gateway Name Server), or other Siebel Server instances. If you have installed multiple Siebel Servers on this machine, make sure you enter a unique SCBroker port for each Siebel Server instance. For more information about SCBroker, see the *Siebel System Administration Guide* and the *Deployment Planning Guide*.

   If you need to change an SCBroker port number later, use Siebel Server Manager to specify a value for the Static Port Number parameter (alias PortNumber).

16 Enter virtual IP address or hostname and virtual port number for a third-party load balancer, if you use one. Click Next and proceed to Step 18 on page 178.

   For information on writing routing rules for third-party HTTP load balancers, see "Managing Load Balancing for Siebel Applications" on page 130.

17 Enter the full path to the load-balancing configuration file (lbconfig.txt). Click Next and proceed to Step 18 on page 178.

   This file must already exist. For more information, see "SWSE Installation Requirements" on page 172.

18 Enter the name of your Enterprise Server and click Next.

   The Compression Type screen appears.

19 Select the type of compression you want to use for communications between the SWSE and the Siebel Servers, and click Next:

   None

   ZLIB

   The Encryption Type screen appears.

20 Select the encryption type the Siebel Web Clients should use to communicate with the Application Object Managers and click Next:

NONE. No networking encryption. Select this option if you will be configuring SSL between the Siebel Server and the Web server. Later in the configuration process, you will do additional configuration for SSL, starting in Step 28 on page 180.

RSA. Required protocol if you will be using the RSA Security Systems 128-bit strong encryption feature for data transport.

NOTE: The Siebel Servers that connect to this SWSE must be configured to use the same protocol. For more information, see Chapter 7, "Installing the Siebel Server."

For more information on the options on this screen, see the *Security Guide for Siebel Business Applications*.

The Web Server HTTP Port screen appears.

21 Accept the default Web server HTTP port (80) used for Web browser communications, or enter a new port number, and click Next.

The Web Server HTTPS (Secure HTTP) Port screen appears.

22 Accept the default Web Server HTTPS port (443) used for secure Web browser communications, or enter a new port number, and click Next.

The Web Update Protection Key screen appears.

23 Enter the Web Update Protection Key that your administrator will use for updating files on the SWSE and click Next.

For more information, see "Updating Web Server Static Files on the SWSE Using the Web Update Protection Key" on page 191.

The Anonymous Login Employee Name screen appears.

24 Enter the employee's anonymous login ID and click Next.

NOTE: This value should be a login ID that any employee may use to access the Login view. The login ID should be a valid client login with privileges to navigate to Login views. This parameter is for employees who may browse applications without logging in.

25 Enter the employee's anonymous login password, confirm it, and click Next.

NOTE: The password for the anonymous employee login is stored in the eapps.cfg file, and is encrypted by default. For more information about managing encrypted passwords in the eapps.cfg file, see the *Security Guide for Siebel Business Applications*.

The Anonymous Login Contact Name screen appears.

26 Enter the contact user login ID and click Next.

27 Enter the contact user login password, confirm it, and click Next.

NOTE: The password for the contact user login is stored in the eapps.cfg file, and is encrypted by default. For more information about managing encrypted passwords in the eapps.cfg file, see the *Security Guide for Siebel Business Applications*.

■ If you are installing in console mode, the Deploy Secure Sockets Layer in the Enterprise screen appears (in a different wizard). Go to Step 28 on page 180.

■ If you are installing in GUI mode, go to Step 32 on page 180. If you want to configure SSL, you must start the wizard manually. For details, see the *Security Guide for Siebel Business Applications*.

28 Indicate whether you want to deploy Secure Sockets Layer (SSL) in your enterprise. Select or clear the Yes box on this screen.

■ If Yes, proceed to Step 29 on page 180.

■ If No, proceed to Step 32 on page 180.

For more information about configuring SSL, see the *Security Guide for Siebel Business Applications*.

29 On the Certificate File Name screen, enter the following and click Next:

Certificate File Name. The certificate file name.

CA Certificate File Name. The certificate authority file identifying the trusted authority who issued the certificate.

The Private Key File Name screen appears.

30 Enter the following and click Next:

Private Key File Name. Name of the private key file.

Private Key File Password. Password for the private key file name.

Private Key File Password (confirm). Password you entered in the preceding example.

The Peer Authentication screen appears.

31 Select whether or not you want Peer Authentication.

The Restart screen appears.

32 Indicate whether or not you want to restart the Web server now to complete the changes and click Next.

NOTE: If you do not choose to restart your Web server processes at this time, you must do so before making Siebel Business Applications available to your users through their browsers.

CAUTION: For supported Apache-based Web servers (including IBM HTTP Server and HP Apache Web Server), choosing the option to restart the Web server executes the commands stopapa and startapa. From now on, any time you restart the Web server, you *must* do so using these commands. Do not use the apachectl command for this purpose.

The Finish screen appears.

33 To complete the installation, click Finish.

Postinstallation Tasks for the SWSE

Perform the following postinstallation tasks as required by your deployment:

■ *"Configuring the Web Server" on page 181*

■ *"Reviewing the Installation for the SWSE" on page 183*

■ *"Creating Custom Virtual Directories" on page 185*

■ *"Setting SWSE Directory Permissions" on page 185*

■ *"Granting User Permissions on the Web Server" on page 185*

■ *"Configuring Sun Java System Web Server to Accept the SWSE" on page 187*

■ *"Enabling HTTP Compression for Siebel Applications" on page 188*

■ *"Editing the SWSE Configuration File (eapps.cfg)" on page 188*

■ *"Configuring the Default HTTP and HTTPS Ports for the Web Server" on page 189*

■ *"Reviewing the Log Files for the SWSE" on page 190*

■ *"Updating Web Server Static Files on the SWSE Using the Web Update Protection Key" on page 191*

Configuring the Web Server

This section describes steps for configuring the Web server for use with the SWSE.

For version information for supported Web servers and the operating systems they run on (where you also install SWSE), see *System Requirements and Supported Platforms* on Siebel SupportWeb.

For IBM HTTP Server or HP Apache Web Server, to configure the Web server for use with the SWSE, you must edit the Web server httpd.conf file. For Apache-based Web servers, the httpd.conf file is the main Web server configuration file. It contains the configuration directives that give the server its instructions.

■ If you are using IBM HTTP Server, the httpd.conf file is located under *IHS_ROOT*/conf, where *IHS_ROOT* is the IBM HTTP Server installation directory.

■ If you are using HP Apache Web Server, the default directory is /opt/hpws/apache.

You should use the following guidelines for setting parameters in the httpd.conf file when using IBM HTTP Server or HP Apache Web Server with Siebel applications.

■ **Required**

■ Make sure your section <worker.c> looks like the following:

```
<IfModule worker.c>
ThreadLimit N
StartServers 1
ServerLimit 1
MaxClients N
MinSpareThreads 1
MaxSpareThreads N
```

```
ThreadsPerChild N
MaxRequestsPerChild 0
</IfModule>
```

where:

N = Two times the average number of concurrent users

■ The User and Group values should correspond to an existing user who has appropriate permissions. Most importantly, the user should have appropriate permissions for various SWSE directories.

■ **Recommended**

■ Set UseCanonicalName to OFF. You are required to set UseCanonicalName to OFF if you load-balance Web servers.

■ Set KeepAliveTimeout to 15 seconds.

■ Set MaxKeepAliveRequests=0 for maximum performance.

■ **Optional**

You can comment out the line that loads the CGI module, if you are not using the CGI functionality of IBM HTTP Server or HP Apache Web Server. Commenting out the line makes tracking IBM HTTP Server or HP Apache Web Server processes simpler because there is always one child process.

■ **IBM HTTP Server**

```
LoadModule cgid_module modules/mod_cgid.so
```

■ **HP Apache Web Server**

```
LoadModule cgi_module modules/mod_cgi.so
```

Detailed information about the directives in httpd.conf is available at http://www.apache.org.

Configuring HP Apache Web Server for Optimal Performance

Siebel Business Applications will run slowly on HP Apache Web Server unless you make the following changes to the httpd.conf configuration file.

1 Edit the /etc/privgroup file. If it does not exist, create it. Add the following entry to the file:

apache_group_name RTPRIO

where:

■ *apache_group_name* = The group name containing the username that owns the HP Apache Web Server

2 Save the file and exit.

3 In the shell, execute the following command:

```
setprivgrp –f /etc/privgroup
```

4 Add the following to the file $APACHE_ROOT/bin/startapa, at the beginning of the file:

    rtprio 127 –$$

5 Save the file and exit.

Reviewing the Installation for the SWSE

Review the physical and virtual directories created during installation of the Web Server Extension on the Web server host to familiarize yourself with the locations of files such as the eapps.cfg configuration file.

Verifying Physical Directories on the SWSE Installation

The following list shows some of physical directories and files created after you install the SWSE on the Web server. Some of these folders are not created until the first login. In the list, *language* represents languages you have installed, such as ENU for U.S. English.

```
SWEApp/
        _uninst/
        admin/
        bin/
                        language/
                        eapps.cfg
                        sweiis.dll
        install_script/
        locale/
                        language/
        log/
        public/
                        language/
                                        demo/
                                        files/
                                        images/
        base.txt
        language.txt
        log.txt
        upgrade.log
```

_uninst. Contains files required for uninstallation of the product.

admin. Contains the file swseapps.scm, which is used during installation. This file launches the dialog boxes used during configuration of the Siebel Business Applications.

bin. Contains the SWSE configuration file (eapps.cfg) and the libraries needed for the SWSE functionality.

locale. Contains resource files with information about any run-time errors.

log. Reports communication errors between the SWSE and the Application Object Managers in the Siebel Servers.

public. Each language-specific subdirectory contains the default HTML file (default.htm) used to redirect the browser to the SWSE and subdirectories of the Siebel Server.

Verifying Virtual Directories on the Web Server

Virtual directories are installed on the Web server for each installed Siebel Business Application. For example, there is an eservice_enu directory for Siebel eService using U.S. English (ENU).

To verify the virtual directories on IBM HTTP Server and HP Apache Web Server

■ Open the Web server configuration file httpd.conf.

   ■ If you are using IBM HTTP Server, this file is located under *IHS_ROOT*/conf, where *IHS_ROOT* is the IBM HTTP Server installation directory.

   ■ If you are using HP Apache Web Server, the default directory is /opt/hpws/apache.

The following example partially illustrates a virtual directory structure visible for Siebel Business Applications on AIX or HP-UX.

```
Alias /ecustomer_enu /vol1/siebel/eappweb/public/enu
Alias /callcenter_enu /vol1/siebel/eappweb/public/enu
Alias /sales_enu /vol1/siebel/eappweb/public/enu
```

To verify the virtual directories on Sun Java System Web Server

■ Open the Web server configuration file obj.conf, located under $SunOneserver/ webserverinstance/config.

The following example partially illustrates the virtual directory structure for Siebel Business Applications on the Sun Java System Web Server:

```
NameTrans fn="pfx2dir" from="/ecustomer_enu" dir="/export/home/siebel/public/enu"

NameTrans fn="pfx2dir" from="/callcenter_enu" dir="/export/home/siebel/public/enu"

NameTrans fn="pfx2dir" from="/sales_enu" dir="/export/home/siebel/public/enu"...
```

Creating Custom Virtual Directories

Virtual directories are created automatically when you install the SWSE. However, you may in some cases want to create your own virtual directory—for example, to be able to test features like Web Single Sign-On (Web SSO)—and point to an existing Application Object Manager.

NOTE: To create custom virtual directories, use the instructions provided in Technical Note 456 on Siebel SupportWeb.

Setting SWSE Directory Permissions

The Web server administrator and all Siebel users and groups should have read and execute permission on all SWSE virtual directories. If these permissions are not granted, login pages will not be rendered properly.

The user running the SWSE plug-in should have read and write permissions to the *SWSE_ROOT*/public/*language* directory on the Web server machine (where SWSE is installed), so that static public files can be cached on the Web server to enhance application performance.

Granting User Permissions on the Web Server

After installing the SWSE on a Web server running UNIX, take the following steps.

To modify permissions on all platforms

■ Verify that the Web server administrator has read and execute permission on all SWSE directories and files.

■ Verify that the subdirectory *SWSE_ROOT*/public, which contains the files for the Web image publishing and file caching features, has read and write permission to the SWSE process owner.

To modify permissions on Sun Java System Web Server

1 Verify that you have installed the required version of Sun Java System Web Server, as documented in *System Requirements and Supported Platforms* on Siebel SupportWeb.

2 After the correct version of the Sun Java System Web Server is installed, use the Sun Java System Web Server administration console to create a Web server instance. You can find the administration console at:

> *Sun_Java_System_Web_Server_install*/https-admserv

where:

■ *Sun_Java_System_Web_Server_install* = The root directory of the Sun Java System Web Server

3 In that directory, run ./start to start the Admin Web Server instance if it is not running.

4   Open an instance of Internet Explorer browser and enter the following URL:

   http://*machineName*:*portNumber*/https-admserv

where:

■ *machineName* = The name of the local machine on which the Web server resides

■ *portNumber* = The port number of the HTTP Admin Web server

The Sun Java System Web Server administration console is displayed in the browser window.

5   In the Web server administration console, choose Add Server. Enter the following values required to define the new instance of the Web server:

■ **Server Name.** This value can be any name, but is usually the host computer's name, as in *machine_name*.*domainname*.*com*.

■ **Server Port.** The port number on which you want to run this Web server.

   If you use port 1 to 1024, you must have root privileges to start the Web server. If you do not have or need root privileges, use a port number greater than 1024. Verify that your port is available using a command like the following:

   netstat -a | grep *port_number*

   CoreDumpDirectory "*directory_name*"

where *directory_name* is the directory to hold the core dumps.

■ **Server Identifier.** This can be any name, but is usually identified as *machine_name*.

■ **Server User.** Usually either *root* or the system user based on which port you choose and which user you want to control the Web server instance.

■ **MTA Host.** Accept the default.

6   Verify that the account the Sun Java System httpd daemon uses has the following privileges:

a   Write permissions for the *SWSE_ROOT*/log directory. Typically, to do so, you must change the permissions for the appropriate directory.

b   Read and write permissions to all files and subdirectories in the *SWSE_ROOT*/public and *SWSE_ROOT*/public/enu directory.

To modify permissions on IBM HTTP Server and HP Apache Web Server

1   Make sure that the login running the Web server has the following permissions for the scripts installed with the SWSE:

■ Read, write, and execute privilege for starting and stopping the Web server.

■ Write permission for the log file path.

■ Read-write permissions to files in *SWSE_ROOT*/public.

CAUTION: If you use port 1 to 1024, you must have root privileges to start the Web server. If you do not have or need root privileges, use a port number greater than 1024. Verify that your port is available using the following command:

netstat -a | grep *port_number*

2 Install the SWSE, as described in "Installing and Configuring the SWSE" on page 175. Run the installer program under a user account that can modify IBM HTTP Server or HP Apache Web Server configuration files.

NOTE: If you installed your Web server using root privileges, you must have root privileges to install the SWSE.

3 Verify that the account the IBM HTTP Server or HP Apache Web Server httpd daemon uses has the following privileges:

a Write permissions for the *SWSE_ROOT*/log directory. Typically, to do so, you must change the permissions for the appropriate directory.

b Recursive read and write permissions to all files in the *SWSE_ROOT*/public and *SWSE_ROOT*/public/enu directory.

Configuring Sun Java System Web Server to Accept the SWSE

For the Sun Java System Web Server (formerly Sun ONE Web Server) running under the Solaris operating system, you *must* configure the Web server to accept the changes that the SWSE installer makes to the Web server configuration files after you install SWSE. Otherwise, changes that you may make in the future to the Web server configuration will overwrite the changes made by the Siebel installation script.

To make sure that Sun Java System Web Server accepts changes made by SWSE

1 Navigate to the Sun Java System Web Server Administration page. (For instructions, see the Sun Java System documentation.)

2 Click the button that shows the server instance on which the SWSE was installed.

The Server Preferences page for the instance appears.

3 On the upper-right side of the Server Preferences page, click Apply.

Another page with a warning message appears:

WARNING: The configuration files have been edited by hand. Use this button to load the latest configuration files.

4 Click Load Configuration Files. This displays the message:

Success! The most recent config files have been loaded.

This message indicates that the Sun Java System Web Server has accepted the changes made to it by the installer.

Sun Java System Web Server References to the eapps.cfg File

During installation, the Siebel installer adds a reference to the Sun Java System Web Server configuration file magnus.conf. This file specifies global settings of the Web server, such as server information, object file configuration, DNS lookup, ACL, and so on.

A typical line the installer would add to magnus.conf might resemble the following example:

    Init fn="swe-init" config-file="*SWSE_ROOT*/bin/eapps.cfg" siebel-home="*SWSE_ROOT*"

where:

■ *SWSE_ROOT* = The root directory where the SWSE is installed

To locate magnus.conf

■ Navigate to the following path:

    Sun_Java_System_Web_Server_install/https-*your_server_instance_name*/config

where:

■ *Sun_Java_System_Web_Server_install* = The root directory of the Sun Java System Web Server

Enabling HTTP Compression for Siebel Applications

You can specify whether, or when, the SWSE will compress HTTP traffic by setting the value of the DoCompression parameter in the eapps.cfg file. Compressing HTTP traffic, where it is feasible to do so, substantially reduces bandwidth consumption. This feature is supported on HTTP 1.1, and is not supported on HTTP 1.0.

For detailed information about setting values for the DoCompression parameter, see the *Security Guide for Siebel Business Applications*.

Editing the SWSE Configuration File (eapps.cfg)

The SWSE installer installs a single configuration file, eapps.cfg, for all the Siebel Business Applications located in *SWSE_ROOT*/bin.

The eapps.cfg file contains configuration information that you entered during the configuration of the SWSE, including identity and connectivity information for the Application Object Managers, and login and security settings.

You may, if desired, add selected optional parameters manually to affect the selected Siebel Web Client applications as a whole. You may also override the added parameters to determine the performance of one or more applications.

For detailed information about the structure and parameters of the eapps.cfg file, see the *Siebel System Administration Guide*. See also the *Security Guide for Siebel Business Applications*.

To edit the eapps.cfg file

1 Open the eapps.cfg file, located in *SWSE_ROOT*/bin, using the editor of your choice.

2 Make the desired changes. Save and close the file.

3 Stop and restart the following processes in the order shown:

■ Stop the Web server.

■ Stop the Siebel Server, only if you have changed any Siebel Server parameter.

■ Stop the Siebel Gateway Name Server, only if you have changed any Siebel Server parameter.

■ Start the Siebel Gateway Name Server, only if you have changed any Siebel Server parameter.

■ Start the Siebel Server, only if you have changed any Siebel Server parameter.

■ Start the Web server.

For information about configuring security and authentication parameters in the eapps.cfg file for your deployment, see the *Security Guide for Siebel Business Applications*.

Configuring the Default HTTP and HTTPS Ports for the Web Server

The default HTTP and HTTPS ports for the Web server are port 80 and 443, respectively. When you deploy SWSE onto a third-party Web server, you might want to configure these to use a different port numbers. The following procedure provides the steps to configure these ports.

To configure the default ports for HTTP and HTTPS

1 Open the eapps.cfg file.

2 Locate the [defaults] section.

3 Change the port number for HTTPPort and HTTPSPort to a desired port number.

```
HTTPPort = 81
HTTPSPort = 444
```

4 Configure the Web server.

HTTP port for both IBM HTTP Server and HP Apache Web Server

a Using any text editor, open the *SWSE_ROOT*/conf/httpd.conf file.

b Locate the Listen section and change the HTTP port number to the number you set in .

Listen *HostIP*:81

where:

❏ *HostIP* = The IP Address of the Web server

c Change the ServerName value to the same value as the one for Listen.

    ServerName *HostIP*:81

HTTPS port for HP Apache Web Server

a Using any text editor, open the *SWSE_ROOT*/conf/ssl.conf file.

b Change the HTTPS port numbers in the following section to the port number you set in .

```
Listen 444
<VirtualHost_default_:444>
SSLEngine on
```

HTTPS port for IBM HTTP Server

a Using any text editor, open the *SWSE_ROOT*/conf/httpd.conf file.

b Add the following section before the Virtual Directories section to enable SSL.

```
LoadModule ibm_ssl_module modules/mod_ibm_ssl.so
Listen HostIP:444
```

where:

❑ *HostIP* = The IP Address of the Web server

c Add the following section at the end of the httpd.conf file, before the Virtual Directories section.

```
<VirtualHost HostIP:444>
SSLEnable
DocumentRoot $home/$build/web/htdocs/en_US
ErrorLog logs/ssl_error_log
CustomLog logs/ssl_access_log common

</VirtualHost>
Keyfile $home/$build/web/ssl/key.kdb
```

Sun Java System Web Server

a Using the Sun Java System Web Server Admin console, go to the Preferences screen.

b Click on the Edit Listen Sockets tab and change the port number to the new value you set in .

Reviewing the Log Files for the SWSE

SWSE generates one or more log files as a result of connection attempts with the Siebel Server. These log files reside in *SWSE_ROOT*/log.

Depending on the logging level you choose, these files record errors, warnings, and general information. Events such as Web server failures or invalid configuration of the SWSE are captured in these logs. Analyzing the log files can provide clues for troubleshooting SWSE problems.

For more information about reviewing log files and monitoring Web servers and SWSE, see the *System Monitoring and Diagnostics Guide for Siebel Business Applications*.

Updating Web Server Static Files on the SWSE Using the Web Update Protection Key

The Web Update Protection Key is the password your Siebel administrator uses to refresh static files, such as application image files or cascading style sheet files, on your Web server. Your developers may have placed updated versions of these files on the Siebel Server (in the webmaster subdirectory) after customizing the Siebel application with Siebel Tools.

The Web server contacts the Siebel Server, refreshing these static files each time the administrator restarts the Web server. However, administrators can achieve the same result, refreshing the files by just entering this password in a command line, particularly when deploying multiple Web servers.

You set the value of the Web Update Protection Key during SWSE configuration. The value is encrypted (by default) and defined as the value for the `WebUpdatePassword` parameter in the eapps.cfg file for your SWSE installation. Because the password is encrypted, to change the password, you must run the SWSE Configuration Wizard again. (Directly editing the value of the `WebUpdatePassword` parameter in the eapps.cfg file is suitable only when encryption is not used.)

For more information about managing encrypted passwords in the eapps.cfg file, see the *Security Guide for Siebel Business Applications*.

It is not necessary to restart the Web server every time the Web server static files in the SWSE directory must be refreshed. Instead, you can use the Web Update Protection Key you specified when you configured the SWSE, as described below.

For each language-specific application, the directory on the SWSE where the static files are cached is determined by the setting of the `WebPublicRootDir` parameter in the eapps.cfg file.

To refresh the static files on the Web server

1 Start a Web browser session.

2 Type the following URL into the browser:

    http://host:port/application/
    start.swe?SWECmd=UpdateWebImages&SWEPassword=WebUpdateProtectionKey

where:

- ■ *host* = The name of the Web server machine.

- ■ *port* = The Web server listen port (not required if using the default port, 80).

- ■ *application* = Any Siebel application hosted by this Web server (such as callcenter_enu, sales_enu, and so on).

- ■ *WebUpdateProtectionKey* = The unencrypted version of the Web Update Protection Key, which is defined in the eapps.cfg file by the `WebUpdatePassword` parameter.

For example:

    http://siebel:81/sales_enu/start.swe?SWECmd=UpdateWebImages&SWEPassword=siebel

Troubleshooting SWSE Installation

This section provides suggestions for troubleshooting problems you may encounter when installing the SWSE.

Problem: After installation, when launching the Siebel Web Client, a message appears, stating:

> Page Cannot be displayed

Cause: Virtual directories were not installed or configured properly.

Solution: Use the following procedure to resolve the problem.

1 Refresh the connection between your browser and the Web site.

2 Make sure that the Local Path for the virtual directories is correct. This path should be the following:

> *SWSE_ROOT*/public/*language*

3 Make sure that the AnonUserName specified in the eapps.cfg file is also specified in the database with the correct responsibilities. Otherwise, you cannot access the home page.

4 Make sure that the connect string for the Siebel application is correct. It should be defined similar to the following (where load balancing is not deployed):

> ConnectString = siebel.TCPIP.none.none://*SiebelServerHost*:2321/
> *EnterpriseServerName*/*ProductName*ObjMgr_*language*

Problem: Your Siebel application hangs or times out.

Cause: Appropriate parameters are not available within the [default] section of the eapps.cfg file for the Siebel Business Application.

Solution: Make sure that the defaults section of the eapps.cfg file contains valid username, HTTPPort, and HTTPSPort values.

Problem: Inability to access the Siebel Web Client. The browser status bar may display errors, such as SWESubmitOnEnter is undefined, and the login page may appear to hang. Or, the Siebel Web Client login page does not display properly; for example, images may be missing.

Cause: The user running the SWSE plug-in does not have proper permissions to the *SWSE_ROOT*/public/*lang* directory.

Solution: Stop the Web server. Make sure that the user running the Web server has read and write permission to the *SWSE_ROOT* directory and its subdirectories, including *SWSE_ROOT*/public/*lang*. Restart the Web server.

10 Installing Siebel Mobile Web Clients

This chapter provides information about how to install the Siebel Mobile Web Client, Siebel Developer Web Client, and Siebel Sample Database, and about how to start Siebel applications. It includes the following topics:

- "About Installing the Siebel Client" on page 193
- "About Customizing the Siebel Client Installer" on page 194
- "Process of Installing the Siebel Client" on page 195
- "Preinstallation Tasks for the Siebel Client" on page 195
- "Installing the Siebel Mobile Web Client and Developer Web Client" on page 197
- "Installing the Siebel Sample Database" on page 203
- "Importing Non-ENU Repository and Seed Data into the Siebel Sample Database" on page 205
- "Postinstallation Tasks for the Siebel Client" on page 206
- "Logging in to Your Siebel Application" on page 209
- "Siebel Client Shortcuts and Start-Up Options" on page 211
- "Using Siebel QuickStart with the Siebel Mobile Web Client" on page 216

For the uninstallation procedure, see "Uninstalling Siebel Clients" on page 262.

About Installing the Siebel Client

Siebel Mobile Web Client and Developer Web Client installations are supported on the operating systems and hardware described in *System Requirements and Supported Platforms* on Siebel SupportWeb. These clients are installed and run on supported Microsoft Windows platforms only.

This book assumes that installations are performed by administrators, not end users.

NOTE: You can install or run multiple instances of the Siebel client on the same system. ActiveX controls used in high-interactivity applications are versioned differently for each Siebel product release, including maintenance releases. Except for maintenance releases, which are applied to an existing base installation, you must install each different version in a separate location.

To support Mobile Web Client users after installation, you also verify connection to the Siebel Remote Server. For more information, see "Postinstallation Tasks for Siebel Server" on page 124. See also the *Siebel Remote and Replication Manager Administration Guide*.

For information about customizing the Siebel client installer, see "About Customizing the Siebel Client Installer" on page 194.

For information about uninstalling Siebel client software, see "Uninstalling Siebel Clients" on page 262.

About Customizing the Siebel Client Installer

Most of the topics in this chapter focus on installations using default installation parameters set by Siebel Systems. However, you can modify installer behavior in certain ways.

If you want to prepare custom software installation packages for distribution to end users, you install the Siebel client as a model installation. After completing client installation and configuration, you run the Siebel Packager utility. A model client installation serves as the basis for a package. For details about using Siebel Packager, see *Going Live with Siebel Business Applications*.

Whether or not you use Siebel Packager, you can modify the behavior of the client installer by updating the siebel.ini and setup.ini files for the Siebel client installer. These files are part of the Siebel image you created in Chapter 4, "Creating the Siebel Installation Image on the Network."

The siebel.ini file controls Siebel settings for the install session.

For more information about the function of the siebel.ini file and how you can modify it, see comments contained within the siebel.ini file itself, see installation topics on Siebel SupportWeb, and see *Going Live with Siebel Business Applications*.

Although unattended or console installation is not supported for the Siebel client installer, some information in Chapter 5, "Installing in Unattended and Console Modes," is also relevant to modifying the siebel.ini file for the client installer.

In general, do not modify values in the siebel.ini file for the client installer that contain variables. Some specific values of this type are described below.

■ The values $(MobileClient)=no or $(MobileClient)=yes contain variables and should not be modified.

- ■ $(MobileClient)=no means that the parameter applies if you are installing the Developer Web Client and does not apply if you are installing the Mobile Web Client.

- ■ $(MobileClient)=yes means that the parameter applies if you are installing the Mobile Web Client and does not apply if you are installing the Developer Web Client.

■ The value $(Slipstream)=no contains a variable and should not be modified. This value means that the parameter applies if the current Siebel product is *not* being installed using slipstream installation. For more information about slipstream installation, see "About Installing Siebel Releases" on page 15 and see the applicable *Maintenance Release Guide* on Siebel SupportWeb.

For each Language Pack you included when installing the Siebel client, the file predeploy.htm is loaded. This file downloads ActiveX controls to the client machine. For information about suppressing the loading of this file by editing the siebel.ini file for each language you are installing, see "Installing the Siebel Mobile Web Client and Developer Web Client" on page 197.

When EnableLangDlg is set to Y (the default) in the [Startup] section of the siebel.ini file, the dialog box for selecting Language Packs to install will be displayed. If you want a client installer to be used only for adding particular Language Packs to existing installations, set EnableLangDlg to N. Then, in the [Defaults.LanguageSelection] section of the file, set each language to be installed to yes.

The setup.ini file controls InstallShield settings for the install session. When EnableLangDlg is set to Y (the default) in the [Startup] section of the setup.ini file, the dialog box for choosing the installer language (labeled *Choose Setup Language*) will be displayed. If EnableLangDlg is set to N, the installer runs in the language for the user's locale or in the default language defined in setup.ini (usually English). For more information, see "The Language in Which Siebel Installers and Wizards Run" on page 25.

Process of Installing the Siebel Client

The Siebel client installation and setup consists of the following tasks which should be performed by the Siebel administrator:

You can choose to install the Mobile Web Client or the Developer Web Client. When you install the Siebel client or the Sample Database, you also install language extension packs.

1 Review the preinstallation tasks. See "Preinstallation Tasks for the Siebel Client" on page 195.

2 Install the Siebel client. See "Installing the Siebel Mobile Web Client and Developer Web Client" on page 197.

3 (Optional) Install the Siebel Sample Database. See "Installing the Siebel Sample Database" on page 203.

4 Verify the installation. See "Postinstallation Tasks for the Siebel Client" on page 206.

5 As necessary, modify values for configuration parameters for the Mobile Web Client or Developer Web Client. For more information, see the *Siebel System Administration Guide*.

6 Log in to the Siebel application. See "Logging in to Your Siebel Application" on page 209.

Preinstallation Tasks for the Siebel Client

Review the issues and tasks in this section before running the Siebel client installer.

Administrative Rights for Installation

Administrative rights are required for installation or uninstallation of the Siebel Mobile Web Client or Developer Web Client.

For information on setting administration rights, consult the operating system manuals for the version of Microsoft Windows on which you are installing the Siebel client software.

For information about uninstalling Siebel client software, see "Uninstalling Siebel Clients" on page 262.

Directory Naming Conventions

By default, the Siebel client installer assumes an installation directory of C:\Program Files\Siebel\7.8\Web Client. You can specify to install in a different location, but the default location is generally recommended.

Use installation directory names that describe both the version number and the component being installed. The directory name can use any characters appropriate for Windows-compatible long filenames.

In this book, the directory into which you install the Siebel client is often referred to as *SIEBEL_CLIENT_ROOT*. If you install into a directory other than the default, make appropriate substitutions through the remainder of this chapter.

Installation paths are in some cases represented in application configuration files or application shortcuts using the MS-DOS "8.3" file-naming convention. For more information, see "Siebel Client Start-Up Options" on page 213.

CAUTION: Do not install other Siebel components, such as Siebel Tools, into the same directory where you have installed the Siebel client, such as C:\Program Files\Siebel\7.8\Web Client. Install each component into a separate directory, or into a subdirectory of the top-level directory, such as a subdirectory of C:\Program Files\Siebel\7.8. However, if you install the Sample Database, you *must* do so in the same directory as the Siebel client. If you install multiple Siebel components on the same machine (that will access different data sources), determine your directory-naming convention before you begin installing.

For Siebel Tools installation, see Chapter 11, "Installing Siebel Tools."

For Siebel Sample Database installation, see "Installing the Siebel Sample Database" on page 203.

Requirements and Recommendations for the Siebel Client

Before beginning Siebel client installation, review the requirements and recommendations for hardware, system software, and third-party software described in *System Requirements and Supported Platforms* on Siebel SupportWeb.

Restricted Support for Siebel Developer Web Client

The Siebel Developer Web Client is not supported for end-user deployment. This client type is supported only for development, troubleshooting, and limited administration usage scenarios.

NOTE: In previous 7.x versions, the Developer Web Client was known as the Dedicated Web Client.

Database Connectivity Software for the Developer Web Client

Siebel Developer Web Client computers connecting directly to the Siebel Database must have the correct vendor-specific database connectivity software installed. See *System Requirements and Supported Platforms* on Siebel SupportWeb.

NOTE: The correct version of database connectivity software must be installed before installing the Siebel client (assuming that the relevant siebel.ini file settings have not been modified).

For additional information, see "Postinstallation Tasks for the Siebel Client" on page 206.

When you have installed your database connectivity software, configure it as follows:

■ For IBM DB2 UDB for UNIX and Windows, you install and configure the DB2 client software to connect to the Siebel Database. The connect string and table owner information should be recorded on the worksheet in Appendix A, "Deployment Planning Worksheet." Use the ODBC driver version specified in *System Requirements and Supported Platforms* on Siebel SupportWeb.

■ For Oracle Database, you install and configure the Oracle client software to connect to the Siebel Database. The connect string and table owner information should be recorded on the worksheet in Appendix A, "Deployment Planning Worksheet." Use the driver version specified in *System Requirements and Supported Platforms* on Siebel SupportWeb.

  For an Oracle client, you should use a binary sort order for development environment databases. This setting is required for adequate performance from the Developer Web Client.

  For more information, see "Specifying the Locale for Siebel Applications" on page 26. See also "Guidelines for Configuring Oracle for Siebel Applications" on page 53 and the *Upgrade Guide*.

■ For IBM DB2 UDB for z/OS, you use DB2 Connect to connect from the Developer Web Client to the Siebel Database. For details, see *Implementing Siebel Business Applications on DB2 UDB for z/OS*.

Other Third-Party Software

Your Siebel application may require some third-party software products to be installed on the local client, for full functionality. For more information about third-party software, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

For information about requirements for the Web browser environment for running Siebel Web Clients, see also the *Siebel System Administration Guide*.

Install the following third-party software for full Siebel client functionality:

NOTE: Remember to install on the client machines all software required to view any standard attachment types your deployment may use within the Siebel implementation.

Closing Browser Sessions

Before you install the Siebel client software, it is recommended that you close any browser sessions on the client machine.

For information about requirements for the Web browser environment for running Siebel Web Clients, see also the *Siebel System Administration Guide*.

Installing the Siebel Mobile Web Client and Developer Web Client

This section describes how to install the Siebel Mobile Web Client and Developer Web Client. The software installed on the user's machine for Siebel Mobile Web Client and Developer Web Client is identical. Therefore, a single installer provides the software necessary to run either type of client.

For general information about these Siebel client types, see the *Deployment Planning Guide*.

Before you begin installation, review "Preinstallation Tasks for the Siebel Client" on page 195.

Each Siebel client is designed to support only a single Siebel Enterprise. To support multiple Enterprises on a single machine for testing purposes, be sure to install clients in separate directories. For more information, see "Directory Naming Conventions" on page 195.

Siebel Client Installer Flow

The standard Siebel Mobile Web Client and Developer Web Client installer performs the following:

■ Checks the client computer to verify whether required components have already been installed.

■ Creates all required ODBC data sources.

■ Installs the Siebel client software and specified language extension packs.

■ Creates Siebel application and utility shortcuts.

■ Allows the installation log file to be viewed.

■ Predeploys ActiveX controls used by the Siebel client.

Predeploying ActiveX Controls

After the Siebel client installation described later in this section completes, the file predeploy.htm is loaded in a browser window. This file downloads ActiveX controls used by the Siebel client, including those required for high interactivity mode.

The predeploy.htm file is located in the directory *SIEBEL_CLIENT_ROOT*\public*language*, where *SIEBEL_CLIENT_ROOT* is the directory where the client is installed, and *language* is the directory for a Language Pack you have installed. (If you have installed multiple languages, then the predeploy.htm file is loaded separately for each installed language.)

NOTE: You can specify to turn off loading predeploy.htm prior to installation. To do this, edit the file *Siebel_Image*\Windows\Client\Siebel_Web_Client*language*/siebel.ini, where *Siebel_Image* is the Siebel installation image location on the network, and *language* is the directory for a Language Pack that can be installed. In the [PreDeploy] section of this file, set Condition = no.

For more information about the ActiveX controls used by the Siebel client, related browser settings, and the predeploy.htm file, see the browser configuration chapter in the *Siebel System Administration Guide*.

Procedure for Installing the Siebel Client

Complete the following steps to install the Siebel Mobile Web Client or Developer Web Client and specified language extension packs.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install the Siebel Mobile Web Client or Developer Web Client software

1 In Windows Explorer, navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

In this case, navigate to *Siebel_Image*\Windows\Client\Siebel_Web_Client.

where:

■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as D:\Siebel_Install_Image\7.8.2.0.

CAUTION: You must run this installation program from a network drive mapped to a drive letter. If you attempt to install from an unmapped network drive, the installer may be unable to locate files it needs to proceed and may fail.

2 Double-click install.exe to start the Siebel client installer.

3 In the Choose Setup Language screen, choose the language in which to conduct the installation, then click OK.

The default installation language is the one that corresponds to the current regional settings on the installation machine.

4 If you have an existing Siebel client installation, you can choose to add language extension packs to this installation.

■ If you are installing a new instance of the Siebel client, click Next.

■ If you are adding languages to an existing Siebel client installation:

❏ Select the check box next to the line identifying the existing installation to which you are adding languages, then click Next.

❏ Select the check box next to each language you are installing, then click Next.

❏ Proceed to Step 9 on page 200.

5 In the Welcome screen, click Next.

6 In the Setup Type screen, verify that the Siebel client installation directory listed is correct. The default directory is C:\Program Files\Siebel\7.8\Web Client. Perform one of the following:

■ Click Next to accept the default directory.

■ Edit the directory text, such as to append the build number to the Siebel directory level, or to specify another drive such as D:, then click Next.

■ Click Browse, select a different destination directory, then click Next.

For details on pathname requirements, see "Directory Naming Conventions" on page 195.

7 While still in the Setup Type screen, select the type of installation to perform:

■ **Typical.** Installs all base Siebel client components, plus the following optional components: Help Files, Third-Party Help Files, and Packager Utility. This option is recommended for most users. Proceed to Step 9 on page 200.

■ **Compact.** Installs all base Siebel client components. Proceed to Step 9 on page 200.

■ **Custom.** Installs all base Siebel client components and lets you specify whether to install
any or all optional components. Some of these options are preselected by default. Proceed
to Step 8 on page 200.

NOTE: Siebel administrators should install Server Manager and the Siebel Packager utility.

8 For a custom installation, select from the Select Components screen the optional components
you want to install. This screen appears only if you chose Custom installation in Step 7 on
page 199.

9 In the Choose Languages screen, select the languages (that is, Language Packs) to install. The
language in which you are performing the installation, specified in Step 3 on page 199, is
preselected as a default. You must specify at least one language to install.

If you are installing Language Packs for an existing Siebel client installation, go to Step 21 on
page 202.

Verify that your destination machine has sufficient disk space for the installation, then click Next.

NOTE: The installer displays space requirements for only one drive. The drive that contains the
TEMP directory requires at least 10 MB free prior to installation. Also, pay attention to your hard
drive file system configuration. Using a FAT configuration with a 64-KB allocation unit is not
recommended, because this may leave insufficient space for installation of all necessary
components and cause the installation to fail. Configure file systems using NTSF instead.

10 In the Select Client Type screen, specify if you are installing the Mobile Web Client or the
Developer Web Client, then click Next.

NOTE: Some of the remaining installation steps in this procedure apply only if you are installing
the Mobile Web Client, or only if you are installing the Developer Web Client.

For Mobile Web Client installations, go to Step 12 on page 200.

11 *Developer Web Client installations only:* In the Server Database screen, select the type of server
database on which you are implementing your Siebel application. Choose one of the following,
then click Next:

■ IBM DB2 UDB for Windows and UNIX

■ Microsoft SQL Server

■ Oracle Database 9i or 10g Enterprise Edition (CBO)

■ IBM DB2 UDB for z/OS

NOTE: Based on your choice, the Siebel client installer validates that the correct database
connectivity software has been installed. If not, you must exit the Siebel client installer, install
the required software, then restart the client installer.

12 In the File System Server Information screen:

■ For Mobile Web Client, accept the default value, then click Next.

■ For Developer Web Client, either accept the default value or enter the directory path for a
network-based Siebel File System, then click Next.

NOTE: If you specify a non-default value for the Siebel File System directory path, you can use
a UNC share name (for example, \\SRV1\siebfile) or a mapped drive (for example, K:\siebelFS).

13 In the Remote Server Information screen, enter your Siebel Remote Server connectivity information, then click Next. (This step applies to the Siebel Mobile Web Client only; for the Developer Web Client, click Next to accept the default.)

For Mobile Web Client installations, go to .

14 *Developer Web Client installations only:* In the Database Identification screen, enter the following information. Specify information for the database you specified in the Server Database screen in :

■ For IBM DB2 UDB for UNIX and Windows, specify the Database Alias and Table Owner, then click Next.

■ For Microsoft SQL Server, specify the Server Name and Database Name, then click Next.

■ For Oracle Database, specify the Database Alias and Table Owner, then click Next.

■ For IBM DB2 UDB for z/OS, specify the Database Alias (as defined in DB2 Connect) and Table Owner or Schema Qualifier, then click Next.

15 *Developer Web Client installations only:* In the Enterprise Server Information screen, specify the address of the Siebel Gateway Name Server and the name of the Enterprise Server to which this client will connect for administration.

The Gateway Name Server Address is the network name or the IP address of the machine on which the Siebel Gateway Name Server is installed. To enter a specific port number, append the Gateway Name Server Address string with a colon and the desired port number.

The Enterprise Server name is the name under which the Siebel Servers that support this client's server database were installed.

16 *Mobile Web Client installations only:* In the Enterprise Server Information screen, specify the address of the Siebel Gateway Name Server and the name of the Enterprise Server, then click Next.

NOTE: The Siebel Gateway Name Server address is typically the machine name or VIP where the Name Server is running.

17 In the Server Request Broker Information screen, specify the Request Server Name: the name of the Siebel Server on which the Server Request Broker component is operating. This component is used for dynamic assignment and other interactive operations. Then click Next. (This step applies to the Siebel Developer Web Client only; for the Mobile Web Client, click Next to accept the default.)

18 In the Search Server Information screen:

■ For Mobile Web Client, accept the default values, then click Next.

■ For Developer Web Client, if you will use Siebel Search (Hummingbird SearchServer), either accept the default values or enter the following for the server on which Siebel Search is operating, then click Next:

❏ Hostname

❏ Port Number (if using non-default port number)

NOTE: For system requirements and other information on implementing Siebel Search, see the *Siebel Search Administration Guide*.

19 In the Select Program Folder screen, enter the name of the program folder that will contain your Siebel shortcuts, then click Next.

The default name is Siebel Web Client 7.8. You can use spaces and use the backslash (\) in folder names to create a folder hierarchy.

Clicking Next in this step initiates file transfer. The setup program copies files to the local hard disk. A status bar in the Setup Status dialog box indicates the progress of the installation. You can cancel installation while files are being copied to the local disk.

The setup program copies files to the local hard disk for each specified language, in addition to those that were installed for the base installation.

A status bar in the Setup Status dialog box indicates the progress of the installation. You can cancel installation while files are being copied to the local disk.

If you have installed all specified Language Packs, proceed to the next step. Alternatively, if you have installed Language Packs for an existing client installation, the installer exits. Skip the rest of this procedure.

20 After installation, the file predeploy.htm is loaded in a browser window, as noted earlier in this section. When the page displays the following message, indicating that ActiveX downloading is finished, close the browser window:

The download is complete, you may close the window.

21 Review the information presented in the Event Log screen, then click Next.

This log provides details of the steps the installer has performed during your Siebel client installation.

NOTE: Write down the name of the installation directory as shown in this screen, for future reference.

22 Review the information presented in the Registry Log screen, then click Next.

This log provides details of the registry information the installer has performed during your Siebel client installation.

23 Click Finish in the InstallShield Wizard Complete screen.

The Siebel client installation is now finished. Siebel application shortcuts are created in the program folder specified in Step 19 on page 202. For more information, see "Siebel Client Shortcuts" on page 211.

24 Review the installation log to verify that all components installed successfully.

If you are installing the Siebel Sample Database, see "Installing the Siebel Sample Database" on page 203.

To verify successful installation, see "Postinstallation Tasks for the Siebel Client" on page 206.

Installing the Siebel Sample Database

The Sample Database contains example data of various kinds to help you understand how the Siebel Business Applications work. You install the Sample Database for the Siebel Mobile Web Client. This database, like the local database used with the Siebel Mobile Web Client, is based on SQL Anywhere.

NOTE: Installation of the Siebel Sample Database is optional and applies to the Siebel Mobile Web Client. Before you can install the Sample Database, you install the Mobile Web Client, as described in "Installing the Siebel Mobile Web Client and Developer Web Client" on page 197. (The Sample Database can also be installed with the Developer Web Client.)

A Sample Database installed with the Siebel Mobile Web Client can also be used with Siebel Tools. To configure this, copy the value of the ConnectString parameter from the [Sample] section of the application configuration file, such as uagent.cfg for Siebel Call Center (located in *SIEBEL_CLIENT_ROOT*\bin\enu), then paste this value for the equivalent parameter in the tools.cfg file (located in *SIEBEL_TOOLS_ROOT*\bin\enu). Alternatively, you can install the Sample Database into the Siebel Tools directory instead of the Mobile Web Client directory. For information about installing Siebel Tools, see Chapter 11, "Installing Siebel Tools."

For platform requirements for installing and using Siebel clients and the Siebel Sample Database, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

After you have installed the Sample Database, you can run Siebel Demo applications, such as those described in "Siebel Client Shortcuts and Start-Up Options" on page 211. You can also customize shortcuts, as described in the same section.

See also the subsection on directory names in "Preinstallation Tasks for the Siebel Client" on page 195.

If you install a non-ENU Language Pack, see also "Importing Non-ENU Repository and Seed Data into the Siebel Sample Database" on page 205.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install the Siebel Sample Database

1 In Windows Explorer, navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

   In this case, navigate to *Siebel_Image*\Windows\Client\Siebel_Sample_Database.

   where:

   ■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as D:\Siebel_Install_Image\7.8.2.0.

   CAUTION: You must run this installation program from a network drive mapped to a drive letter. If you attempt to install from an unmapped network drive, the installer may be unable to locate files it needs to proceed and may fail.

2 Double-click install.exe to start the Sample Database installer.

3   In the Choose Setup Language screen, choose the language in which to conduct the installation, then click OK.

The default installation language is the one that corresponds to the current regional settings on the installation machine.

4   If you have an existing Sample Database installation, you can choose to add language extension packs to this installation.

■   If you are installing a new instance of the Siebel Sample Database (into a Siebel client installation that does not already have the Sample Database), click Next, then go to Step 5 on page 204.

■   If you are adding languages to an existing Siebel Sample Database installation:

❏   Select the check box next to the line identifying the existing Sample Database installation to which you are adding languages, then click Next.

❏   Select the check box next to each language you are installing, then click Next.

❏   Proceed to Step 9 on page 205.

5   In the Welcome screen, click Next.

6   In the Setup Type screen, verify that the Sample Database installation directory listed is correct. The default directory is C:\Program Files\Siebel\7.8\Web Client.

CAUTION: You must install the Sample Database in the same location where you installed the Siebel Mobile Web Client.

■   Click Next to accept the default directory.

■   Click Browse to select a different destination directory (if you installed the Siebel client in a nondefault location), then click Next.

For details on pathname requirements, see "Directory Naming Conventions" on page 195.

7   While still in the Setup Type screen, select the type of installation to perform:

■   **Typical.** Installs the Sample Database plus optional components. This option is recommended for most users. Proceed to Step 9 on page 205.

■   **Compact.** Installs the Sample Database plus optional components. Proceed to Step 9 on page 205.

■   **Custom.** Installs the Sample Database and lets you specify whether to install the following optional components: Sample Files and Sample Search Index. These options are selected by default. Proceed to Step 8 on page 204.

NOTE: For the standard installer for the Siebel Sample Database, the Setup Type options currently install the same components. In a customized installation, these options may install different elements.

8   For a custom installation, select from the Select Components screen the optional components you want to install. This screen appears only if you chose Custom installation in Step 7 on page 204.

9 In the Choose Languages screen, select the languages (that is, Language Packs) to install.

If you are installing Language Packs for an existing Siebel client installation, go to .

Verify that your destination machine has sufficient disk space for the installation, then click Next.

NOTE: After you install the Sample Database, you may need to import repository data and seed data for a specified non-ENU language, depending on your requirements. For details, see "Importing Non-ENU Repository and Seed Data into the Siebel Sample Database" on page 205.

10 In the Select Program Folder screen, enter the name of the program folder that will contain your Siebel shortcuts, then click Next.

The default name is Siebel Web Client 7.8. You can use spaces and use the backslash (\) in folder names to create a folder hierarchy.

Clicking Next in this step initiates file transfer. The setup program copies files to the local hard disk. A status bar in the Setup Status dialog box indicates the progress of the installation. You can cancel installation while files are being copied to the local disk.

The setup program copies files to the local hard disk for each specified language, in addition to those that were installed for the base Sample Database installation.

A status bar in the Setup Status dialog box indicates the progress of the installation. You can cancel installation while files are being copied to the local disk.

If you have installed all specified Language Packs, proceed to the next step. Alternatively, if you have installed Language Packs for an existing Sample Database installation, the installer exits. Skip the rest of this procedure.

11 Review the information presented in the Event Log screen, then click Next.

This log provides details of the steps the installer has performed during your Sample Database installation.

12 Click Finish in the Setup Complete screen.

The Siebel Sample Database installation is now finished. Siebel Demo application shortcuts (for example, Siebel Call Center Demo - ENU) are created in the program folder specified in . For more information, see .

To verify successful installation, see .

Importing Non-ENU Repository and Seed Data into the Siebel Sample Database

By default, the SRF file installed with each language extension pack you install for the Siebel client contains the appropriate localization strings to display correct field labels for this language. In addition, demo user data is installed for each Language Pack you install for the Siebel Sample Database.

However, the Sample Database contains only ENU repository data and seed data, even after you have installed a non-ENU language for the Siebel client and for the Sample Database.

If you want to work with non-ENU repository data or seed data in the Sample Database, you must import the necessary localization strings into the Siebel Repository tables. After you have done this, you can view the non-ENU repository data by connecting to the Sample Database using the Siebel Tools Client, and you can view the non-ENU seed data in a Siebel application context.

To import non-ENU localization strings, you run the samp.bat batch file.

CAUTION: The samp.bat batch file first *deletes* the ENU repository data and seed data, and then inserts the repository data and seed data for the language you specify.

The file samp.bat is installed in *SIEBEL_CLIENT_ROOT*\sample\UTF8, where *SIEBEL_CLIENT_ROOT* is the directory where you installed the Siebel client and the Sample Database.

The syntax for using the samp.bat batch file is as follows:

samp *SIEBEL_CLIENT_ROOT ODBC_DATA_SOURCE LANGUAGE*

where:

■ *SIEBEL_CLIENT_ROOT* = The directory where you installed the Siebel client and the Sample Database.

■ *ODBC_DATA_SOURCE* = The ODBC data source you are using for the Sample Database. See also "Verifying ODBC Data Sources for the Siebel Mobile Web Client and Developer Web Client" on page 208.

■ *LANGUAGE* = The three-letter code for the language for which you are installing repository data and seed data.

For example, run samp.bat in a DOS command window using a command like the following:

```
samp "C:\Program Files\Siebel\7.8\web client" "SEAW Samp Db default instance" DEU
```

NOTE: Before you import repository data and seed data into the Sample Database, make sure the SQL Anywhere database engine is running. It is running if you have started a Siebel Demo application after initially installing the Sample Database with U.S. English.

The SQL Anywhere database engine starts when the Siebel Mobile Web Client initially connects to the Sample Database during a Windows session. If the configuration parameter AutoStopDB is FALSE (default), the database engine continues to run after the user logs out of the Siebel application. If AutoStopDB is TRUE, the database engine exits when the user logs out. AutoStopDB is defined in the [Sample] section of the application configuration file, such as uagent.cfg for Siebel Call Center. For more information about Siebel application configuration parameters, see the *Siebel System Administration Guide*.

Postinstallation Tasks for the Siebel Client

Review the following issues and perform the related tasks after running the Siebel client installer, to verify a successful Siebel client installation:

■ "Configuring the Siebel Client When Siebel VB or Siebel eScript Is Not Licensed" on page 207

■ "Verifying the Siebel Client Directory Structure" on page 207

■ "Verifying ODBC Data Sources for the Siebel Mobile Web Client and Developer Web Client" on page 208

Then you can start the Siebel application, as described in "Logging in to Your Siebel Application" on page 209.

Configuring the Siebel Client When Siebel VB or Siebel eScript Is Not Licensed

The default configuration files for the Siebel client have Siebel VB or Siebel eScript enabled. This is done by setting the parameter EnableScripting to TRUE. If this parameter is TRUE, but you do not have either Siebel VB or Siebel eScript licensed, the client does not start. An error message is returned, indicating that you must turn off Siebel VB or Siebel eScript before running the client.

To configure Siebel client when Siebel VB or Siebel eScript are not licensed

■ Set EnableScripting to FALSE in the configuration file used by your Siebel client configuration. This configuration file resides in the directory *SIEBEL_CLIENT_ROOT*\bin*LANGUAGE*.

Verifying the Siebel Client Directory Structure

The Siebel client installer creates directories on each Siebel client. Use Windows Explorer to verify the directory structure on your computer. Following are an example of the directory structure of a typical Siebel client installation and descriptions of individual directories.

■ *SIEBEL_CLIENT_ROOT.* The directory for the Siebel client installation, such as C:\Program Files\Siebel\7.8\Web Client (the default). This installation directory contains the directories identified in the following section. You can change the name during the installation process. For more information, see "Directory Naming Conventions" on page 195.

■ **actuate.** Contains all the Actuate-related files, for Siebel Reports.

■ **bin.** Contains all binary files (*.exe, *.dll, and so on), configuration files (*.cfg), user preference files, and language-specific files.

■ **charts.** Contains files for generating charts.

■ **fonts.** Contains font files.

■ **isstempl.** Contains templates for the Customer Order Management CDA application and engine files for newly created projects.

■ **jar.** Contains JAR files (these are not used with Microsoft Internet Explorer).

■ **lex.** Contains dictionary files used by the spelling checker.

■ **local.** Where the local database is stored.

■ **locale.** Stores language-specific files.

■ **log.** Stores the log files from client operations, such as synchronization.

■ **msgtempl.** Stores message files used by the client.

■ **objects.** Contains compiled Siebel repository (SRF) files and language-specific files.

   NOTE: Monitoring of any SRF file by virus scanning software may significantly degrade Siebel Mobile Web Client or Developer Web Client performance. If you have virus scanning software installed on your computers, you should configure it to skip SRF files. Because these files are binary data files, the risk of virus infection is low, and so excluding these files from scanning should be acceptable. Alternatively, you may choose to scan SRF files, but less frequently than other files.

■ **packager.** Stores files used by the Siebel Packager utility.

■ **public.** Contains HTML, ActiveX, Java, and JavaScript files, and image files used by the client.

■ **reports.** Contains all report files.

■ **sample.** Where the Sample Database is installed.

■ **sqltemp.** Contains SQL scripts. These files should not be modified.

■ **temp.** Contains working report files.

■ **upgrade.** Will contain Siebel Anywhere upgrade files retrieved by the user.

■ **webtempl.** Contains Siebel application Web templates.

Verifying ODBC Data Sources for the Siebel Mobile Web Client and Developer Web Client

Based on settings defined in the siebel.ini file for the Siebel client, the client installer creates the ODBC data sources shown in Table 21 on page 209.

By default, these are created as user data sources, which are visible only to the user account under which the Siebel client is installed. If two or more users need to log in using the same Windows client machine, install the client using the SystemDSN parameter instead of the UserDSN parameter in the siebel.ini file.

For each data source name, an optional DSN suffix may be defined to allow multiple DSN instances to be referenced from the siebel.ini file. This is required if you will install multiple instances of the Siebel software on the same machine, each of which will access a different data source.

In the data sources shown in Table 21 on page 209, the DSN suffix is represented as *optional_DSN_suffix*. In the siebel.ini file, the suffix is specified using the parameter DsnSuffix. Usually, this parameter is set to either *default instance* or *$(EnterpriseServer)*. If you require additional instances of this DSN to be defined in the siebel.ini file, set this parameter to an appropriate string value for each additional DSN instance.

In Table 21 on page 209, another optional string, the DSN prefix, is represented as *optional_DSN_prefix*. The DSN prefix comes before the DSN suffix. The ODBC data sources for the Sample Database and the local database use the values *Samp Db* and *Local Db*, respectively.

For more information about creating custom client installer packages using the Packager utility, see *Going Live with Siebel Business Applications*.

NOTE: Make sure to use the ODBC drivers described in *System Requirements and Supported Platforms* on Siebel SupportWeb.

Table 21.   Siebel Client ODBC Data Sources

Data Source	When It Is Used
SEAW *optional_DSN_prefix* *optional_DSN_suffix*	For IBM DB2 installations only (Developer Web Client), connects to the DB2 database.
SEAW Local Db *optional_DSN_suffix*	Connects to the local database (SQL Anywhere).
SEAW Samp Db *optional_DSN_suffix*	Connects to the Siebel Sample Database (SQL Anywhere).
SEAW *optional_DSN_prefix* *optional_DSN_suffix*	For Oracle installations only (Developer Web Client), connects to the Oracle database. This data source is used only by the Siebel administrator when creating Siebel Anywhere upgrade kits. This data source must include the following settings, which are specified in the applicable registry entry: ColumnsAsChar = 1 ColumnSizeAsCharacter = 1
SEAW Search *optional_DSN_suffix*	ODBC data source used by Hummingbird SearchServer; created only if Hummingbird is installed. This data source is always created as a SystemDSN.

Logging in to Your Siebel Application

This section provides basic instructions for logging into your Siebel application through these Siebel client types:

■ Siebel Developer Web Client

■ Siebel Mobile Web Client

■ Siebel Web Client

Before logging in, review requirements described in this book or related documents. Also note the following issues:

■ User rights to read and write in Siebel client installation directories are required for running the Siebel Mobile Web Client or Developer Web Client.

For information on setting user rights, consult the operating system manuals for the version of Microsoft Windows on which the application is installed.

■ After the Siebel Database has been installed, users will be unable to use the Siebel application until the license key for a base Siebel application has been entered into the Siebel Database.

You enter license keys initially by using the Siebel Developer Web Client or Siebel Tools Client. Additional licenses or licenses for optional modules can be entered subsequently using the Siebel Web Client, Siebel Developer Web Client, or Siebel Tools Client.

NOTE: You can find the license key that has been assigned to your site in the license key letter provided with the DVD case, or, if you used FTP to download the software, in a Word document. For detailed information about license keys, see the *Applications Administration Guide*.

■ The user name and password used to log in to Siebel applications must be those of an employee with a valid position and division defined in the Siebel Database. Therefore, the first time you log in to the server database, do so as an administrator. Use SADMIN as the user name and password, or use different credentials, as defined by your administrator. Then you can set up other users as employees with defined positions and responsibilities.

For more information on setting up employees, see the *Security Guide for Siebel Business Applications*.

■ The Web browser must be correctly configured to run the Siebel application. High-interactivity and standard-interactivity applications have different requirements. High-interactivity applications can use the client health check feature to verify that requirements have been met.

For more information on configuring the browser for high interactivity and standard interactivity, see the *Siebel System Administration Guide*. See also *System Requirements and Supported Platforms* on Siebel SupportWeb.

To log in to your Siebel application using the Siebel Developer Web Client

1 Double-click one of the Siebel shortcuts in the program folder, such as Siebel Call Center.

2 Log in using a valid user ID and password.

3 Specify the Server database and click OK.

NOTE: The first time you log in to the Server database, you are prompted to enter your site's license key number.

4 Enter your license key number in the dialog box that appears and click OK.

If you see a warning message dialog box, click OK, and then enter your license key number in the dialog box that appears.

NOTE: If you need to access license keys at a later time, such as to enter additional license keys, you can do so from the License Keys view. To access this view from the application menu, choose Navigate > Site Map > Administration - Application > License Keys.

To log in to your Siebel application using the Siebel Mobile Web Client

1 Double-click one of the Siebel shortcuts in the program folder, such as Siebel Call Center.

2 Log in using a valid user ID and password.

3 Specify the Local database and click OK.

   NOTE: When logging into a local database for the first time, users are automatically prompted to connect to the Siebel Server and download the local database. Users should attempt this only after a local database has been extracted for them.

   For more information on Siebel Remote and extracting local databases, see the *Siebel Remote and Replication Manager Administration Guide*.

To log in to your Siebel application using the Siebel Web Client

1 Open your Web browser.

2 Go to the URL for your Siebel application.

3 Log in using a valid user ID and password.

   The Siebel application you are connecting to is already configured to work with a specific database. You do not need to specify a database to connect to.

Siebel Client Shortcuts and Start-Up Options

This section provides information about the shortcuts installed in the Siebel program folder when you install the Siebel client, and about command-line options used in these shortcuts.

It also provides information about creating custom shortcuts to access Siebel applications using demo users other than those specified in the predefined shortcuts installed with the Siebel Sample Database.

For lists of demo users provided with the Siebel Sample Database, by Siebel application, see the *Demo Users Reference*.

Siebel Client Shortcuts

The Siebel client and Sample Database installers create shortcuts in the Siebel program folder for the modules you have installed. For Siebel applications, separate shortcuts are installed for each installed language. Which shortcuts are installed depends on your installation choices and is also subject to the settings in the siebel.ini file. Most shortcuts are installed in the program group; some are installed in the start-up group.

For information about customizing the shortcuts, see .

Siebel application shortcuts installed by the client installer are listed here. When you run a shortcut to start a Siebel application, you can connect to the Siebel Database (for LAN-connected users of the Siebel Developer Web Client), to an initialized local database on the local machine (for Mobile Web Client), or to the Sample Database on the local machine (if it has been installed). The Demo application shortcuts connect to the Sample Database using predefined demonstration users.

Each application shortcut loads the Siebel configuration file for that application—for example, Siebel Call Center uses the file uagent.cfg.

Siebel Application Shortcuts

The following are the Siebel application shortcuts installed in the Siebel client program group:

■ **Siebel Call Center.** Starts Siebel Call Center.

■ **Siebel Call Center Demo.** Starts Siebel Call Center, using the Sample Database.

■ **Siebel Employee Relationship Management Administration.** Starts Siebel Employee Relationship Management Administration.

■ **Siebel Employee Relationship Management.** Starts Siebel Employee Relationship Management.

■ **Siebel Employee Relationship Management Demo.** Starts Siebel Employee Relationship Management, using the Sample Database.

■ **Siebel Marketing.** Starts Siebel Marketing.

■ **Siebel Marketing Demo.** Starts Siebel Marketing, using the Sample Database.

■ **Siebel Partner Manager.** Starts Siebel Partner Manager.

■ **Siebel Partner Manager Demo.** Starts Siebel Partner Manager, using the Sample Database.

■ **Siebel Partner Portal.** Starts Siebel Partner Portal.

■ **Siebel Sales.** Starts Siebel Sales.

■ **Siebel Sales Demo.** Starts Siebel Sales, using the Sample Database.

■ **Siebel Service.** Starts Siebel Service.

■ **Siebel Service Demo.** Starts Siebel Service, using the Sample Database.

Utility and Synchronization Program Shortcuts

The following are additional shortcuts installed in the Siebel client program group. These shortcuts run utilities such as Siebel Packager or synchronization programs.

■ **Siebel Packager.** Starts the Siebel Packager utility. For more information, see *Going Live with Siebel Business Applications*.

■ **Siebel Patch Utility.** Starts the Siebel Patch utility (siebpatch.exe). For more information, see the *Siebel Anywhere Administration Guide*.

■ **Siebel Remote.** Starts the Siebel Remote stand-alone synchronization program (siebsync.exe). For more information, see the *Siebel Remote and Replication Manager Administration Guide*.

■ **Siebel TrickleSync.** Starts the Siebel TrickleSync program (autosync.exe). This shortcut is created in both the program group and the start-up group. For more information, see the *Siebel Remote and Replication Manager Administration Guide*.

■ **Siebel Sales Handheld Sync.** Starts the Siebel Sales Handheld Sync synchronization program (syncmanager.exe).

■ **Siebel Service Handheld Sync.** Starts the Siebel Service Handheld Sync synchronization program (syncmanager.exe).

■ **Siebel QuickStart.** Starts the Siebel QuickStart agent, for Siebel Mobile Web Client users. For more information, see "Using Siebel QuickStart with the Siebel Mobile Web Client" on page 216.

NOTE: The Siebel QuickStart shortcut is not installed by default. To install it, specify QuickStart = YES in the [Icons] section of the siebel.ini file. The shortcut is created according to the settings in the [QuickStart] section of the file. The shortcut is installed in the start-up group when Folder = startup. The shortcut must be located in the start-up group to function correctly.

Siebel Client Start-Up Options

The application shortcuts described in "Siebel Client Shortcuts" on page 211 run an executable program called siebel.exe, followed by various start-up options. For example, the shortcut for Siebel Call Center - ENU may be defined as shown in the following example (depending on your installation location). For this example, the only option used is /c, to specify the configuration file.

```
"C:\Program Files\Siebel\7.8\web client\BIN\siebel.exe" /c CFG_FILE_PATH\uagent.cfg
```

The Demo application shortcuts also specify the Sample Database, user and password information, and CTI simulation. For example, the shortcut for Siebel Call Center Demo - ENU may be defined as shown in the following:

```
"C:\Program Files\Siebel\7.8\web client\BIN\siebel.exe" /c CFG_FILE_PATH\uagent.cfg
/d sample /u CCHENG /p CCHENG /ctsim
```

In the preceding examples, *CFG_FILE_PATH* represents the full path to the configuration file, using the MS-DOS "8.3" file-naming convention. This file is located in BIN*LANGUAGE* in the *SIEBEL_CLIENT_ROOT* directory, such as BIN\ENU for U.S. English.

For example, the actual target definition for the Siebel Call Center - ENU shortcut may resemble the following example:

```
"C:\Program Files\Siebel\7.8\web client\BIN\siebel.exe" /c
"C:\PROGRA~1\SIEBEL~1\7.8\WEBCLI~1\bin\ENU\uagent.cfg"
```

The siebel.exe program may also be run from an MS-DOS window. In this case, the start-up options may be entered directly on the command line. For information about creating custom shortcuts, see "Creating Custom Siebel Application Shortcuts" on page 215.

The available start-up options are described in

Table 22.   Siebel Client Start-Up Options

Start-Up Option	Description
/c *config_file*	Required. Specifies the path and filename for the configuration file to use, such as siebel.cfg for Siebel Sales or uagent.cfg for Siebel Call Center.
/d *data_source*	Specifies the data source to connect to, as defined in the configuration file. The Demo shortcuts specify "/d sample" to access the Sample Database. ■ If you do not use /u and /p to specify a valid Siebel user, and do not use /d to specify a valid data source, then you can specify the data source from the login screen. ■ If you use /u and /p but do not use /d, then the local database is assumed.
/l *language*	Specifies the three-letter code for the language to use for this client session, such as ENU for U.S. English. The applicable Language Pack must have been installed for the client. If you do not use /l to specify a valid language, the language is obtained from the configuration file.
/u *username*	Specifies the user name. The Demo shortcuts specify predefined demo users using /u and /p options. If you do not use /u and /p to specify a valid Siebel user, you must log in from a login screen. For lists of demo users provided with the Siebel Sample Database, by Siebel application, see the *Demo Users Reference*. **CAUTION:** Security issues must be considered in using /u and /p options (in particular /p) to access a live production system. These values are not encrypted.
/p *password*	Specifies the password for the user specified using /u.
/ctisim	Runs the Communications Simulator. This option should generally be used only with predefined Demo shortcuts that specify it, such as Siebel Call Center Demo. For more information, see the *Siebel Communications Server Administration Guide*.

Table 22.   Siebel Client Start-Up Options

Start-Up Option	Description
/b *browser_exe*	Specifies the path and filename for the browser executable program to use for the Siebel client session. The /b option is needed only if a browser that is not supported for the Siebel application is currently the default browser. For example, if you are running a high-interactivity application, such as Siebel Call Center, you must use a supported version of Microsoft Internet Explorer. If this browser is not the default browser, use /b to specify the browser explicitly. For more information about supported browsers for Siebel Business Applications, see *System Requirements and Supported Platforms* on Siebel SupportWeb.
/s *spool_file*	Specifies spooling SQL to a specified output file. This option may be useful for troubleshooting purposes. For more information, see the *Performance Tuning Guide*.

Creating Custom Siebel Application Shortcuts

If you need to customize the Siebel Business Applications shortcuts described in "Siebel Client Shortcuts" on page 211, you can do so by modifying shortcut properties, and changing the value for the Target field. Generally, rather than modifying existing shortcuts or creating them from scratch, it may be best to copy existing ones and rename and modify the copies.

You must observe the following requirements for creating or modifying shortcuts:

■ Do not modify the location displayed in the shortcut property labeled *Start in*. Doing so may cause problems when the Upgrade Wizard is run.

■ When defining the Target value for a shortcut, follow the guidelines for using the options described in "Siebel Client Start-Up Options" on page 213.

The Siebel Sample Database, which is accessed by using one the Demo shortcuts described in "Siebel Client Shortcuts" on page 211, contains many predefined demo users. For example, CCHENG is the demo user for the Siebel Call Center Demo shortcut. Many other demo users are available in the Sample Database that are not represented in the existing Demo shortcuts. Each demo user is intended to illustrate a particular Siebel application as it would appear for a user with certain predefined responsibilities.

For lists of demo users provided with the Siebel Sample Database, by Siebel application, see the *Demo Users Reference*.

To view all available responsibilities

■ From the application-level menu, choose Navigate > Site Map > Administration - Application > Responsibilities.

See also the access control section of the *Security Guide for Siebel Business Applications*.

Using Siebel QuickStart with the Siebel Mobile Web Client

Siebel QuickStart is an agent that is preloaded on a mobile user's machine at start-up and reduces the time required to launch the Siebel Mobile Web Client. Siebel QuickStart is enabled and loaded for the first time from the Siebel application login screen.

NOTE: Siebel QuickStart can be used with the Siebel Mobile Web Client when connecting to the local database or Sample Database. It does not apply to the Siebel Web Client or Developer Web Client.

Siebel QuickStart applies to subsequent instances of the same type of Siebel application session— running the same application as the same user and with the same start-up options. The speed increase provided by QuickStart does not take effect on the initial Siebel login. Subsequent logins of the same type of Siebel application session benefit from QuickStart, until the user disables QuickStart.

Siebel QuickStart stores the encrypted Siebel user name and password in a cookie. For more information about using cookies with Siebel applications, see the *Security Guide for Siebel Business Applications*.

NOTE: Users should disable Siebel QuickStart for existing application sessions before enabling it for another application session.

Enabling and Disabling Siebel QuickStart

Instructions are provided in the following procedures for enabling and disabling Siebel QuickStart.

NOTE: This section assumes that the Siebel QuickStart shortcut is located in the start-up group. The Siebel QuickStart shortcut is not created by default. For information about how to create it, see "Siebel Client Shortcuts" on page 211.

To enable Siebel QuickStart

1   Start a Siebel application with the Mobile Web Client. For example, double-click the shortcut for Siebel Call Center for your applicable language.

2   In the Siebel login screen, check the Enable Siebel QuickStart check box, and log in.

The QuickStart agent is loaded into memory for the rest of the Microsoft Windows session, and is loaded again when the user logs into Windows subsequently, unless the user disables it.

To disable Siebel QuickStart from the login screen

1   Start a Siebel application with the Mobile Web Client. For example, double-click the shortcut for Siebel Call Center for your applicable language.

2   In the Siebel login screen, clear the Enable Siebel QuickStart check box (if it is checked), and log in.

The QuickStart agent is not loaded for this Siebel application session, and does not load subsequently unless it is explicitly specified.

To disable Siebel QuickStart from the system tray

■ Right-click the Siebel icon in the system tray and select Disable On Startup.

If the Siebel application is not running, the QuickStart agent exits. The agent does not load subsequently unless it is explicitly specified.

If the Siebel application is running, the QuickStart agent stays loaded until you log out of the Siebel application session. The agent does not load subsequently unless it is explicitly specified.

Options for the Siebel Icon in the System Tray

When the Siebel application is running or the QuickStart agent is loaded, an icon appears in the system tray. Right-clicking this icon displays several choices:

■ **Exit.** Exits the QuickStart agent for the current Windows session. This option is available only when the QuickStart agent is loaded and the Siebel application is *not* running. If QuickStart is enabled, the agent loads again the next time the user starts the Siebel application the same way, or starts Windows.

■ **Disable On Startup.** Disables Siebel QuickStart the next time the user starts the Siebel application or starts Windows. Also exits the QuickStart agent, in the manner described in the previous section. This option is available only when the QuickStart agent is loaded, whether or not the Siebel application is running.

■ **About.** Displays information about Siebel applications. This option is available when the Siebel application or the QuickStart agent are running, or both.

■ **Help.** Displays *Siebel Online Help*. This option is available when the Siebel application or the QuickStart agent are running, or both.

Using View Precaching with Siebel QuickStart

When the QuickStart agent is loaded, views specified using the parameters in the [Preload] section of the configuration file, such as siebel.cfg, are preloaded (precached) during start-up of the Siebel application. In subsequent application sessions, navigating to a precached view is faster.

In the [Preload] section, specify the names of the views to be precached as the values for configuration parameters named Vi ew1, Vi ew2, and so on.

For more information about specifying configuration file parameters, see the *Siebel System Administration Guide*.

Specifying QuickStart Availability with Siebel Packager

By default, the siebel.exe program has Siebel QuickStart available. However, administrators may choose to package client installations with QuickStart unavailable—so the Enable Siebel QuickStart check box does not appear on the Siebel login screen and thus cannot be enabled by end users.

When preparing model Siebel client installations to include in packages you create using the Siebel Packager utility, you can disable Siebel QuickStart. To do this, rename or remove the siebel.exe program and then change the name of siebel1.exe to siebel.exe.

For more information on using the Packager utility, see *Going Live with Siebel Business Applications*.

QuickStart and AutoStopDB Configuration Parameter

When you are using Siebel QuickStart, you may also decide to set the configuration parameter AutoStopDB to FALSE for the local database. Both of these features have a similar performance benefit when the Siebel application is started and exited multiple times within the same Windows session.

The AutoStopDB parameter is specified in the [Local] section of the application configuration file, such as uagent.cfg for Siebel Call Center. For more information, see the *Siebel System Administration Guide*.

11 Installing Siebel Tools

This chapter explains how to install Siebel Tools in a Windows environment. It includes the following topics:

- *"Process of Installing Siebel Tools" on page 219*
- *"Siebel Tools Requirements" on page 219*
- *"Installing the Siebel Tools Client" on page 220*
- *"Postinstallation Tasks for Siebel Tools" on page 223*

For the uninstallation procedure, see *"Uninstalling Siebel Tools" on page 262*.

Process of Installing Siebel Tools

The Siebel Tools installation consists of multiple tasks that you should perform in the following sequence:

1 Verify installation requirements. See *"Siebel Tools Requirements" on page 219*.

2 Install Siebel Tools. See *"Installing the Siebel Tools Client" on page 220*.

3 Perform postinstallation tasks. See *"Postinstallation Tasks for Siebel Tools" on page 223*.

    a Connect to the Siebel Database and enter the license key. See *"Verifying Successful Installation of Siebel Tools" on page 223*.

    b Verify the installation directory structure. See *"Verifying the Siebel Tools Directory Structure" on page 224*.

    c Verify read/write access to the Siebel Tools directories. See *"Verify Read/Write Access to Siebel Tools Directories" on page 225*.

    d Verify ODBC data sources. See *"Verify Siebel Tools ODBC Data Sources" on page 226*.

Siebel Tools Requirements

Before you install Siebel Tools, make sure that:

- Your client platform meets the requirements defined in *System Requirements and Supported Platforms* on Siebel SupportWeb for the version of the software you are using.
- You have all the third-party software required for your implementation installed, including the database connectivity software for your chosen RDBMS.

■ You have created the Siebel Database and installed the Siebel schema and seed data, as described in Chapter 3, "Configuring the RDBMS," and Chapter 8, "Installing the Siebel Database Server and Configuring the Siebel Database." This database stores the Siebel Tools project repositories.

A local database can also be initialized for each developer user, as applicable. For more information, see *Configuring Siebel Business Applications* and *Using Siebel Tools*.

NOTE: The Siebel Tools Client can also access demonstration data in the Siebel Sample Database, which you can install with the Siebel Mobile Web Client. For more information, see "Installing the Siebel Sample Database" on page 203 and related sections.

■ To create system data sources, you must modify the SystemDSN parameter in the siebel.ini file before running the Siebel Tools installation. For information about how to modify the SystemDSN parameter in the siebel.ini file, see the *Siebel System Administration Guide*.

NOTE: The sort order for the Siebel Database should be set to binary. If it is set otherwise, you cannot compile or merge repositories.

Administrative Rights for Installation

Administrative rights are required for installation or uninstallation of the Siebel Tools Client.

For information on setting administration rights, consult the operating system manuals for the version of Microsoft Windows on which you are installing the Siebel client software.

For information about uninstalling Siebel Tools Client software, see "Uninstalling Siebel Tools" on page 262.

Installing the Siebel Tools Client

This section describes how to install the Siebel Tools Client.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install Siebel Tools

1 In Windows Explorer, navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

In this case, navigate to *Siebel_Image*\Windows\Client\Siebel_Tools.

where:

■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as D:\Siebel_Install_Image\7.8.2.0.

CAUTION: You must run this installation program from a network drive mapped to a drive letter. If you attempt to install from an unmapped network drive, the installer may be unable to locate files it needs to proceed and may fail.

2 Double-click install.exe to start the Siebel Tools Client installer.

The Choose Setup Language screen appears.

3 Select the language in which you would like to run the installer.

The default installation language is the one that corresponds to the current language of the operating system.

4 If you have an existing Siebel Tools installation, you can choose to add language extension packs to this installation.

■ If you are installing a new instance of the Siebel Tools client, click Next.

■ If you are adding languages to an existing Siebel Tools installation:

❏ Select the check box next to the line identifying the existing installation to which you are adding languages, then click Next.

❏ Select the check box next to each language you are installing, then click Next.

❏ Proceed to .

The Welcome screen appears.

5 Click Next to start the installation process.

6 On the Setup Type screen, perform the following:

a Choose the type of installation to execute from the following options:

■ **Typical.** Installs all Siebel Tools components. This option is recommended for most users. This option does not install the report source code which is required for creating custom reports.

■ **Compact.** Installs all modules except the help files and report source code.

■ **Custom.** Lets you customize your installation by choosing among different components. Each component is listed with the amount of disk space it requires. Click Disk Space to see how much disk space is available on the hard drive and network drives that are accessible from this client computer. This option is recommended for experienced administrators only. If you want to create custom reports you must perform a custom setup and check the report source code component.

NOTE: A warning appears if there is insufficient disk space to install Siebel Tools on the destination host machine. In this case, you must free some disk space before continuing with the installation.

b Select a destination directory and click Next.

By default, setup installs in the directory C:\Program Files\Siebel\7.8\Tools. If desired, you may choose a different drive for installation by clicking Browse. If you specify a directory other than C:\Program Files\Siebel\7.8\Tools, make the appropriate substitutions as you read this chapter.

CAUTION: Do not install Siebel Tools in the same directory as the Siebel client. Doing so will cause memory conflicts and program crashes.

The Choose Languages screen appears.

7   Select the language you want to install and click Next.

NOTE: Siebel Tools must be installed with the English Language Pack. If you need to customize non-English reports, you can install other Language Packs as well. The files specific to the languages chosen in this step are copied to your workstation.

The Server Database screen appears.

8   Select the database client and server, and click Next.

NOTE: The installation program checks that the prerequisite database software is installed on the machine. If it is not, the installation wizard will not proceed.

The File System Server Information screen appears.

9   Type the Siebel File System directory path. Use either the UNC name of the Siebel File System directory or a drive letter mapped to it.

The Remote Server Information screen appears.

10 Type the Siebel Remote Server host name (network name or the machine name) to which this client will connect.

Record the information you provided in Step 9 on page 222 and Step 10 on page 222 in your copy of the worksheet in Appendix A, "Deployment Planning Worksheet."

The Database Information screen appears.

11 Specify the database identification in the worksheet in Appendix A, "Deployment Planning Worksheet."

NOTE: For a development environment database, make sure you are using binary sort order. For details, see the guidelines for selecting a language for your RDBMS, in Chapter 3, "Configuring the RDBMS."

■ **DB2 UDB**

❏ **Database Alias.** Type the database alias for your Siebel Database, as recorded in the worksheet.

❏ **Table Owner.** Type the name of the database account that owns the Siebel tables, as recorded in the worksheet.

■ **Oracle**

❏ **Database Alias.** Type the connect string for your Siebel Database, as recorded in the worksheet.

❏ **Table Owner.** Type the name of the database account that owns the Siebel tables, as recorded in the worksheet.

12 In the Enterprise Server Information screen, specify the address of the Siebel Gateway Name Server and the name of the Enterprise Server to which this Siebel Tools client will connect.

The Gateway Name Server Address is the network name or the IP address of the machine on which the Siebel Gateway Name Server is installed. To enter a specific port number, append the Gateway Name Server Address string with a colon and the desired port number.

The Enterprise Server name is the name under which the Siebel Servers that support this Siebel Tools client's server database were installed.

13 Select the program folder where you want the Siebel Tools icons to be installed. The default is Siebel Tools 7.x. If you do not want to accept the default, you have the following options:

■ Select a folder from the list.

■ Type in a new program folder name.

Clicking Next in this step initiates file transfer. The setup program copies files to the local hard disk. A status bar in the Setup Status dialog box indicates the progress of the installation. You can cancel installation while files are being copied to the local disk.

The Event Log dialog box appears after the installer starts copying files. It describes the steps the installer completes during your Siebel Tools installation.

A message appears, stating that language files are being installed.

The installer completes the installation and displays the Event Log screen.

14 Review the information on this screen and in the file SSDsetup.log, created in the Siebel Tools installation directory. If necessary, take appropriate action to address the errors and rerun the installation. Otherwise, click Next to complete the installation.

Postinstallation Tasks for Siebel Tools

Perform the following tasks after running the Siebel Tools installation program:

■ "Verifying Successful Installation of Siebel Tools" on page 223

■ "Verifying the Siebel Tools Directory Structure" on page 224

■ "Verify Siebel Tools ODBC Data Sources" on page 226

Verifying Successful Installation of Siebel Tools

Verify that installation was successful by connecting to the Siebel Database and entering your license key for Siebel Tools.

To verify that the installation completed successfully

1 Start Siebel Tools and log on to the Siebel Database.

The first time you log on, the system prompts you to enter a license key number, if you have not done so already. If this is the case proceed to Step 2 on page 224.

2 Type your license key number in the dialog box that appears, and click OK.

You can find the license key assigned to your site in your license key letter, provided in the DVD case or within an MS Word document if you have used FTP to download the software. For detailed information about license keys, see the *Applications Administration Guide*.

Verifying the Siebel Tools Directory Structure

The following minimum directories are created for the Typical selection for a Siebel Tools installation. These directories, the files and subdirectories they contain, and various other files are created in the directory you specified during the installation, such as D:\Program Files\Siebel\7.8\Tools.

actuate	Actuate-related files for generating and running reports.	
	afc	Actuate Foundation Class files.
	bin	Actuate binary files.
bin	All binary files (.exe, .dll, .cfg, .dsn, .enu, .bat), configuration files, and user preference files.	
	language	Language-specific dll files.
	dll	Siebel Tools program library files.
	bin	Siebel Tools binary files.
	exe	Siebel Tools executable files.
classes	Java code files.	
	examples	
	examples\src	
	examples\src\com	
	examples\src\com\siebel	
	examples\src\com\extra	
	examples\src\com\integration	
	examples\src\com\integration\mq	Examples of Java code files.
	examples\src\com\integration\servlet	Examples of Java code files.
ddktempl	Dynamic Developer Kit (DDK) files. For more information, see the *Siebel Web UI Dynamic Developer Kit Guide*.	
help	Siebel Tools help files.	
	language	Help files for the language you installed.
local	The local, extracted database.	
	files	Local file attachments.
	inbox	Not used for Siebel Tools.
	outbox	Not used for Siebel Tools.
locale	Language-specific files.	
log	Log files from Siebel Tools operations.	

msgtempl	Message files.
objects	Location of the siebel.srf file, the compiled definition file used by Siebel Tools. This is also the default location for SRF files created using the Siebel Tools object compiler.

NOTE: Monitoring of any SRF file by virus scanning software may significantly degrade Siebel Tools Client performance. If you have virus scanning software installed on your computers, you should configure it to skip SRF files. Because these files are binary data files, the risk of virus infection is low, and so excluding these files from scanning should be acceptable. Alternatively, you may choose to scan SRF files, but less frequently than other files.

public	HTML and graphics files for uploading and cascading style sheet files.	
reports	Location of all report files.	
	language	Version for the language you installed.
reppatch	Location of the XML files used by the maintenance update wizard. All log files generated by the maintenance wizard are also created under reppatch\log.	
	We use the same folder for configuration of the postupgrade wizard rules and log file generation.	
rptsrc	Location of Actuate source files for all reports.	
	language	Version for the language you installed.
	language\lib	Report object library (.rol) files.
	language\standard	Report object design (.rod) files.
sample	Location where the Sample Database (sse_samp.dbf) is installed, if you installed it.	
	files	Where the sample file attachments are installed.
	inbox	Not used for Siebel Tools.
	outbox	Not used for Siebel Tools.
scripts	Location of Java scripts.	
sqltempl	SQL statement fragments used by certain Siebel Tools operations.	
temp	Temporary working area.	
upgrade	Not used for Siebel Tools.	
webtempl	Location of Siebel Web Template (.swt) files.	

Verify Read/Write Access to Siebel Tools Directories

After installing Siebel Tools, verify that the Siebel Tools user has sufficient permissions to read and write data to the Tools directory.

To verify permission settings

1 Select the Siebel Tools root directory and right-click on it.

2 Choose Properties and go to the Security tab.

3 Review and make sure users have read/write access to Siebel Tools directories.

In addition, in user account properties, the Siebel Tools user must not be defined as a restricted user in the group membership section.

Verify Siebel Tools ODBC Data Sources

The Siebel Tools installer creates the ODBC data sources described in . By default, these are created as system data sources, which are visible to all user accounts on the machine where Siebel Tools is installed.

Table 23.   Siebel Tools ODBC Data Sources

Data Source	Use
SSD Local Db default instance	Connects to the local SQL Anywhere database.
SSD	Connects to the DB2 database.
SSD default instance	Connects to the Oracle database.

For Oracle, verify that the following registry keys are set as shown. These values are required in order for the ODBC driver to behave correctly.

```
PacketSize = 0
EnableScrollableCursors = 0
ColumnsAsChar = 1
ColumnSizeAsCharacter = 1
```

12 Installing the Siebel Reports Server

This chapter describes the tasks to install and configure the Siebel Reports Server and related components. It includes the following topics:

About the Siebel Reports Server

In a UNIX environment, the Siebel Reports Server requires the following components:

- **Actuate iServer and Management Console for Siebel.** The Actuate iServer for Siebel generates and manages report documents for the Siebel application. The iServer contains the Encyclopedia volume, a shared repository that stores report items along with related data, such as access privileges and request queues.

  The Management Console manages one or more iServers and Encyclopedia volumes. The Management Console is installed with the Actuate iServer.

- **Actuate Active Portal JSP and Reports View Adapter for Siebel.** The Actuate Active Portal JSP provides access to the Siebel Reports Server from the Web using JavaScript and Java™ Server Page (JSP) tags. Active Portal JSP is used to run, schedule, and view reports in the Siebel application.

  The Reports View Adapter is an application used for viewing the Reports Server views in the Siebel application. The Reports View Adapter is installed with the Actuate Active Portal JSP.

  For more information about iServer, Management Console, and Active Portal JSP products, see the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*.

The Actuate components are customized to work with the Siebel application. Siebel files are installed when each Actuate component is installed.

The same instance of the Siebel Reports Server allows the generation of reports in multiple languages.

The Actuate iServer does not run reports based on the regional settings of the host machine. Instead, it refers to the localemap.xml file (located in the etc folder of the Actuate iServer installation directory). For more information on configuring the iServer locales, see the *Administering Actuate iServer System* manual in the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*.

For designing reports for use in Siebel applications, you may install the following components on a Windows client:

■ **(Optional) Actuate e.Report Designer Professional.** Used by professional developers of structured content to design, build, and distribute report object designs and components throughout the enterprise. Actuate e.Report Designer Professional is used along with Siebel Tools to create and customize Siebel Actuate reports.

Actuate e.Report Designer Professional must be installed on a developer machine that has Siebel Tools installed on it.

■ **(Optional) Actuate e.Report Designer.** Lets you design and build reports using its graphical user interface. This application complements e.Report Designer Professional and is used by business users to modify and distribute a variety of reports. No programming is required, therefore Actuate e.Report Designer is not used to create Siebel Actuate reports. This application supports both modifying complex reports and using components from libraries.

Actuate e.Report Designer must be installed on a developer machine that has Siebel Tools installed on it.

For more information on installing Siebel Tools, see Chapter 11, "Installing Siebel Tools."

For more information about these Actuate products, see the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*.

Except where noted, the installation instructions in this chapter supersede the information in Actuate documentation.

Process of Installing Siebel Reports Server

The following installation steps apply whether all components of the Siebel Reports Server are installed on the same machine or on multiple machines.

To install the Siebel Reports Server, perform the following tasks:

1 Before installing the Reports Server, set up a UNIX account for the Reports Administrator. See .

2 Review preinstallation requirements. See .

3 Install the Siebel Reports Server. See "Siebel Reports Server Installation" on page 230. Installing Siebel Reports Server includes the following components:

■ Actuate iServer and Management Console for Siebel

■ Active Portal JSP and the Reports View Adapter for Siebel

The two components can be installed together or separately.

4 Confirm the installation was successful. See "Verifying Actuate iServer Component Installation" on page 237.

5 Perform postinstallation tasks. See "Postinstallation Tasks for the Siebel Reports Server" on page 239.

6 Install additional designing products for creating Siebel reports if needed. See "Installing the Siebel Report Design Products" on page 235.

The following report design products can be installed for use with the Siebel application:

■ Actuate e.Report Designer Professional

■ Actuate e.Report Designer

The report design products are optionally and are installed on a Windows client. This must be on a developers machine where Siebel Tools is also installed.

Preinstallation Tasks for the Siebel Reports Server

For important preinstallation considerations, refer to the information on configuring an iServer System user account in the *Installing Actuate iServer System* manual. The manual is located in the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*. Read this section carefully and discuss it with your system administrator so that an account for the Siebel Reports Server can be allocated.

Note the following information when installing the Actuate iServer System:

■ Make sure that System Administrator privileges are assigned to the administrator installing the Actuate iServer.

Web administrator privileges are needed for installing and administering the Management Console and the Actuate Active Portal JSP.

■ The default application server used with the Actuate iServer System is the Actuate HTTP service.

The Actuate HTTP service is included in the installations for the Actuate Management Console and the Actuate Active Portal JSP.

Siebel Systems supports the use of other application servers for Actuate Management Console and Active Portal JSP. For more information, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

■ Siebel Reports Server does not support the use of the Lightweight Directory Access Protocol (LDAP) for user authentication. For Siebel reports to function correctly, you will always synchronize users between the Siebel application and the Actuate iServer System.

■ For the Siebel Business Application, installing the Siebel Reports Server in a clustered environment is supported using the Actuate Management Console. For preliminary information on clustering, see "Clustering Siebel Reports Server" on page 247.

■ Siebel Reports Server uses the following default TCP/IP port numbers:

  ■ Actuate iServer – 8000

  ■ Actuate iServer Process Management Daemon – 8100

  ■ Active Portal HTTP Service – 8700

  ■ Management Console HTTP Service – 8900

  You can specify nondefault port numbers during installation. Before you install, validate that all the ports you will use are available.

■ Review the issues described in "Managing Temporary Disk Space Required by Installers" on page 24. For example, make sure you have adequate disk space, and make sure the login ID running the installer has write permissions to this directory.

Siebel Reports Server Installation

Use the following instructions to install the Siebel Reports Server.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install the Siebel Reports Server

1 Open a new shell and navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

For example, for Solaris, navigate to *Siebel_Image*/Solaris/Server/Siebel_Reports_Server.

where:

  ■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as /Siebel_Install_Image/7.8.2.0.

2 Start the Siebel Reports Server installation process by entering the following command:

  ./setup*UNIX_OS*

where:

  ■ *UNIX_OS* = The type of UNIX you are installing, either aix, hpux, or sol

3 The Welcome screen appears. Click Next.

4   If you have an existing Siebel Reports Server installation, you can choose to add language extension packs to this installation.

■   If you are installing a new instance of the Siebel Reports Server, click Next.

■   If you are adding languages to an existing Siebel Reports Server installation:

❏   Select the line identifying the existing installation to which you are adding languages, then click Next.

❏   If the Actuate Server is running, click Yes to stop the server and continue with the installation. Click No to exist the installation.

❏   Enter the Actuate license key and click Next.

❏   Select the check box next to each language you are installing, then click Next.

❏   Proceed to .

5   Select the displayed default directory for file installation, or use the Browse button to select a different drive or directory, and then click Next.

The default installation directory is /siebel_thirdparty.

This directory name must not contain spaces; underscores are allowed.

6   Specify the products to install, and then click Next. The installer prompts you to select one or both of the following sets of products to install:

■   Actuate iServer and Management Console for Siebel

■   Actuate Active Portal JSP and Reports View Adapter for Siebel

NOTE: The Actuate iServer and Management Console are installed and uninstalled together. If you want another instance of one component, such as Actuate Management Console, on a given machine, you must install both components, and you must meet the disk space requirements applicable to both components: approximately 300 MB on your system drive. Subsequently, you can shut down the component you do not need, such as Actuate iServer.

If you install all licensed components at once, the Siebel Reports Server installer prompts you for the installation parameters of each component individually and in the sequence required.

7   Enter the license key for your Actuate products.

8   The installer prompts you to select the type of Siebel Reports Server installation setup you prefer. Choose the type of installation to execute from the following options, and click Next.

■   **Typical.** Installs the components used for the Siebel Reports Server.

■   **Compact.** This setup option is the same as Typical.

■   **Custom.** This setup option is the same as Typical.

9 Select the languages you want to install for the Siebel Reports Server, and click Next.

Servers are installed, at a minimum, with a base language and, optionally, with one or more additional languages.

The installer program performs a validation check to make sure that the installation prerequisites are met. If they are not, a prompt appears, stating which installation requirement is not met.

If you are installing Language Packs for an existing Reports Server installation, go to Step 26 on page 234.

10 Read and accept the terms of the Actuate Software License Agreement and click Next.

NOTE: If you choose not to accept the terms, you will not be able to continue with the installation.

The Locale Information screen for the Actuate iServer Configuration appears.

The Locale Information screen will not appear if you are installing Actuate Active Portal JSP and Reports View Adapter for Siebel only. For Actuate Active Portal JSP and Reports View Adapter for Siebel installations, go to Step 19 on page 233 to continue installing this product.

11 Specify the default locale information and the time zone that will be used for this installation of the Reports Server and click Next.

Individual users can also change the locale and language from within the Siebel application. For more information on changing the locale and language for reports, see the *Siebel Reports Administration Guide*.

12 Specify the host name and port number of the machine where the Process Management Daemon runs. You can accept the defaults shown for the host name (which might be an IP address instead of a host name) and the port number (8100). Click Next.

You may choose to designate a different port number for the Process Management Daemon. For more information, see the *Installing Actuate iServer System* manual in the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*.

13 Specify the host name and port number of the machine where the Actuate iServer runs. You can accept the defaults shown for the host name (which might be an IP address instead of a host name) and the port number (8000). Click Next.

You may choose to designate a different port number for the iServer. For more information, see the *Installing Actuate iServer System* manual in the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*.

14 Type the Encyclopedia volume name and click Next.

The default Encyclopedia volume name is the host name of the machine that runs the Actuate iServer. You may choose to designate a different name for the Encyclopedia volume.

15 Select Yes to have the Process Management Daemon start the iServer automatically.

By selecting Yes, you will not have to manually start the iServer after starting the Process Management Daemon.

Click Next.

16 Type a user-specified password for the Actuate system administrator.

System Administration is accessed through the Actuate Management Console. The system administration password entered here is the one used when you log in to System Administration from the Management Console. The default user name is Administrator.

17 Specify the HTTP port number that the Actuate Management Console will use.

This is the port you will connect your browser to when accessing the HTTP service for the Actuate Management Console. The port number default is 8900.

You may choose to designate a different port number for the Management Console HTTP Service. For more information on port numbers, see the *Installing Actuate iServer System* manual in the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*.

For Actuate iServer and Management Console for Siebel installations only, go to to complete this installation.

18 *Actuate iServer and Management Console for Siebel and Actuate Active Portal JSP and Reports View Adapter for Siebel installations (a full installation):* Read and accept the terms of the Actuate Software License Agreement and click Next.

NOTE: If you choose not to accept the terms, you will not be able to continue with the installation.

19 Select the displayed default directory for the Actuate HTTP Service software installation, or use the Browse button to select a different drive or directory, then click Next.

This directory name must not contain spaces; underscores are allowed.

For Actuate Active Portal JSP and Reports View Adapter for Siebel installations, continue to .

For Actuate iServer and Management Console for Siebel and Actuate Active Portal JSP and Reports View Adapter for Siebel installations (a full installation), go to .

20 *Actuate Active Portal JSP and Reports View Adapter for Siebel installations only:* Specify the default locale information and the time zone that will be used for Actuate Active Portal JSP installation and click Next.

Individual users can also change the locale and language from within the Siebel application. For more information about changing the locale and language for reports, see the *Siebel Reports Administration Guide*.

For Actuate Active Portal JSP and Reports View Adapter for Siebel installations, go to to continue.

21 Specify the port number that the Actuate HTTP Service will use.

This is the port number users will connect their browsers to when accessing the Actuate HTTP Service for the Actuate Active Portal JSP. The port number default is 8700.

You may choose to designate a different port number for this Actuate HTTP Service. For more information on port numbers, see the *Installing Actuate iServer System* manual in the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*.

22 Specify the account information that will be used to run the Actuate HTTP Service.

For Actuate Active Portal JSP and Reports View Adapter for Siebel installations, continue to Step 23 on page 234.

For Actuate iServer and Management Console for Siebel and Actuate Active Portal JSP and Reports View Adapter for Siebel installations (a full installation), go to Step 26 on page 234 to continue.

23 *Actuate Active Portal JSP and Reports View Adapter for Siebel installations only:* Enter the Encyclopedia volume name of the Actuate iServer and click Next.

24 *Actuate Active Portal JSP and Reports View Adapter for Siebel installations only:* Enter the host name (which might be an IP address instead of a host name) and the port number of the Actuate iServer and click Next.

This is the port number in Step 13 on page 232.

This information will be used by Actuate Active Portal JSP and Reports View Adapter for Siebel to contact the Actuate iServer.

25 *Actuate Active Portal JSP and Reports View Adapter for Siebel installations only:* Enter the host name and port number that the Siebel Reports View Adapter will use to contact the Process Management Daemon (PMD) and click Next.

This is the port number in Step 12 on page 232.

The installer displays the location into which it will install the Siebel Reports Server and any other features you have elected to install, and also displays the disk space required for the software you are installing.

26 Click Next to copy the files for the current product into the installation location. Alternatively, to change any settings, click Back, adjust your selections, and click Next to return to this screen.

The installer proceeds to install the specified files.

27 Click Finish.

Starting and Stopping the Actuate Management Console HTTP Service

When the Actuate iServer installation installs Management Console, batch and script files are created to start and stop the Management Console.

To start and stop the Actuate Management Console Service

■ Start Management Console using the StartMC.sh or StartMC scripts.

■ Stop Management Console using the StopMC.sh or StopMC scripts.

These scripts are located in $AC_SERVER_HOME/ManagementConsole/bin.

Installing the Siebel Report Design Products

You can install additional modules for the Siebel Reports Server. These modules add additional features for creating and modifying reports. See the following topics to install these modules:

■ "Installing Actuate e.Report Designer Professional" on page 235

■ "Installing Actuate e.Report Designer" on page 236

Installing Actuate e.Report Designer Professional

Actuate e.Report Designer Professional offers developers of structured content for the Windows platform the added capability of designing, building, and distributing report object designs and components throughout the enterprise.

Installation of Actuate e.Report Designer Professional is not required to run the Siebel Reports Server.

If you install Actuate e.Report Designer Professional, you must install it on a developer machine that has Siebel Tools installed on it.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install Actuate e.Report Designer Professional

1 In Windows Explorer, navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

In this case, navigate to
Siebel_Image\Windows\Client_Ancillary\Siebel_Reports_Client*language*\erdpro.

where:

■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as D:\Siebel_Install_Image\7.8.2.0.

■ *language* = The Siebel code for the Language Pack you installed; for example, enu for U.S. English.

2 Double-click setup.exe.

The Actuate installation wizard will guide you through the installation process.

Compiling Reports with Actuate 7

The Actuate 7 e.Report Designer Professional (erdpro) compiler is more stringent and catches errors that might have been ignored in earlier Actuate versions. To provide backward compatibility for reports developed with Actuate 5.x or 6.x, which fail when compiled with Actuate 7, use the following compilation instructions.

To compile reports with Actuate 7

1 Edit the following registry variable on the system where erdpro is installed:

HKEY_CURRENT_USER\Software\Actuate\e.Report Designer Professional 7.0\Settings\IndirectDataRowMemberAccess

2 Set value to 1 (default value is zero).

3 If IndirectDataRowMemberAccess is not present in your registry, create a DWORD value with the name IndirectDataRowMemberAccess and Hexadecimal value of 1.

4 Close all open erdpro instances and open a new erdpro session.

5 Compile your report.

NOTE: This solution may also apply to new reports created with Actuate 7 erdpro that fail compilation due to Indirect DataRow Member Access.

Installing Actuate e.Report Designer

Actuate e.Report Designer lets developers for the Windows platform design and create reports, using its graphical user interface.

Installation of Actuate e.Report Designer is not required to run the Siebel Reports Server.

If you install Actuate e.Report Designer, you must install it on a developer machine that has Siebel Tools installed on it.

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install Actuate e.Report Designer

1 In Windows Explorer, navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

In this case, navigate to
Siebel_Image\Windows\Client_Ancillary\Siebel_Reports_Client*language*\erd.

where:

■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as D:\Siebel_Install_Image\7.8.2.0.

■ *language* = The Siebel code for the Language Pack you installed; for example, enu for U.S. English.

2 Double-click setup.exe.

The Actuate installation wizard will guide you through the installation process.

Verifying Actuate iServer Component Installation

You should verify that the Siebel Reports Server and its components were successfully installed before continuing with the postinstallation tasks for the Siebel Reports Server.

To verify installation of the Actuate iServer and Management Console for Siebel

1 Make sure that the Process Management Daemon is started.

2 Open a Web browser and access the Management Console's login page by typing the URL:

> http:*//host*:*port/*acadmin/login.jsp

where:

- ■ *host* = The name of the machine where the Actuate Management Console is installed.
- ■ *port* = The port number that the Actuate HTTP Service listens on. The default port number is 8900.

The Management Console login page appears.

3 Using the default user name Administrator with the corresponding password click Log In.

The Management Console Files and Folders page appears.

4 Confirm that the Actuate Report Executable (ROX) files are correctly imported into the Reports Server encyclopedia.

  a Select the Files & Folders tab.

  b Click the Siebel Reports folder in the Name column.

  For the reports shown, the Type column should reflect Actuate Report Executable as the file type.

  c While still in the Siebel Reports folder, click the Language folder in the Name column.

  For the reports shown, the Type column should also reflect Actuate Report Executable as the file type.

  The files in this folder correspond to the languages you have installed on the Reports Server. Each language will have a separate folder each containing ROX files.

To confirm a successful installation of Actuate Active Portal JSP

1 Confirm that the Actuate HTTP Service 7 used by Active Portal JSP is running.

2 Open a Web browser and access the Active Portal JSP login page by typing the URL:

> http:*//host*:*port/*acweb/login.jsp

where:

- ■ *host* = The name of the machine where the Actuate Active Portal JSP is installed.

■ *port* = The port number that the Actuate HTTP Service listens on. The default port number is 8700.

The Active Portal JSP login page appears.

NOTE: Because the Single Sign-On feature is implemented during the Reports Server installation, you will not be able to directly access the Active Portal JSP beyond the home page.

To confirm a successful installation of Reports View Adapter for Siebel

1 Confirm that the Actuate HTTP Service 7 used by Reports View Adapter for Siebel is running.

2 Open a Web browser and access Reports View Adapter for Siebel's login page by typing the URL:

`http://host:port/sswebapp/login.jsp`

where:

■ *host* = The name of the machine where the Reports View Adapter for Siebel is installed.

■ *port* = The port number that the Actuate HTTP Service listens on. The default port number is 8700.

The Reports View Adapter for Siebel login page appears.

NOTE: Because the Single Sign-On feature is implemented during the Reports Server installation, you will not be able to directly access the Reports View Adapter for Siebel beyond the home page.

Setting Actuate iServer Parameters

The Reports Server administrator should set the Actuate iServer parameter Factory services properties - Number of Requests Before Recycling Processes to 100 to avoid memory leaks.

For instructions on how to modify this Actuate iServer parameter, see the *Administering Actuate iServer System* manual in the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf.*

NOTE: To set parameters for Actuate iServer, open the Actuate Management Console, log in to System Administration, select a Server, and select the Advanced tab.

Actuate iServer Postinstallation Task

After installing the Actuate iServer, you must install TrueType fonts in order to view reports in PDF format. For instructions on installing TrueType fonts, see the *Working with Multiple Locales* manual in the Actuate folder of the *Siebel Business Applications Third-Party Bookshelf*.

The following are the TrueType fonts required by Siebel reports:

■ ARIAL.TTF

■ ARIALBD.TTF

■ ARIALBI.TTF

■ ARIALUNI.TTF

Postinstallation Tasks for the Siebel Reports Server

After installing the Siebel Reports Server, you must perform the following tasks:

■ "Setting the JAVA_OPTS Parameter" on page 239

■ "Defining the External Host and Symbolic URLs" on page 240

■ "Enabling the Siebel Reports Server with the Siebel Web Client" on page 242

■ "Enabling the Siebel Reports Server with the Siebel Developer Web Client" on page 243

■ "Using Load Balancing with the Siebel Reports Server" on page 245

■ "Testing the Siebel Reports Server from the Siebel Web Clients" on page 245

■ "Synchronizing Siebel Users to the Reports Server" on page 246

■ "Synchronizing Locale-Sensitive Parameters" on page 247

Setting the JAVA_OPTS Parameter

On AIX and HP-UX, the JAVA_0PTS option is required to be set for Single Sign-On from the Siebel application to the Reports Server to successfully work.

On all UNIX platforms, the JAVA_0PTS parameter is also used to increase the heap size if you run into *Out of Memory* errors while trying to access any of the Actuate JSP pages.

To set the JAVA_OPTS parameter for AIX and HP-UX

1 Navigate to the Actuate HTTP Service installation (for example, /export/home/actuate7/activeportal/actuate_http_service/bin) and locate the file setclasspath.sh.

2 Search for JAVA_0PTS and enter:

        -Djava.library.path=/export/home/actuate7/activeportal/actuate_http_service/bin

To set the JAVA_OPTS parameter for Out of Memory errors for all UNIX platforms

1 Navigate to the Actuate HTTP Service installation (for example, /export/home/actuate7/activeportal/actuate_http_service/bin) and locate the file setclasspath.sh.

2 Search for JAVA_OPTS and enter:

JAVA_OPTS="-Xms*Min*m -Xmx*Max*m"

where:

■ *Min* and *Max* = Integer values (in MBs) that specify the minimum and maximum heap size for the Actuate HTTP Service process

CAUTION: If you specify more than one JAVA_OPTS option, make sure that all the options are set at one place or that they are compounded, using JAVA_OPTS="$JAVA_OPTS current_options". Otherwise, only the latest setting will be in effect, which can cause problems.

The following are examples for setting the JAVA_OPTS parameter for *Out of Memory* errors:

■ Use this approach if JAVA_OPTS is set in only one file (such as setclasspath.sh).

JAVA_OPTS="-Djava.library.path=/export/home/actuate7/activeportal/ actuate_http_service/bin -Xms256m -Xmx512m"

■ Use this approach if JAVA_OPTS is set in multiple files (such as setclasspath.sh and catalina.sh). You will use compounding in each file where JAVA_OPTS is set.

JAVA_OPTS="$JAVA_OPTS -Xms256m -Xmx512m"

Defining the External Host and Symbolic URLs

Establishing an external host and symbolic URLs allow for the display of external data (from an external Web site) in the Siebel application. This procedure informs the Siebel application where to find the Active Portal JSP.

For Siebel reports, configuring Host Administration and symbolic URLs:

■ Allows the display of the content for My Reports, My Jobs, and Personal Profile views under Reports Server screens.

The external application used is the Reports View Adapter for Siebel.

■ Allows for the running and scheduling of Reports using Active Portal JSP.

■ Provides the single sign-on technology that eliminates the need to log in manually to the Reports Server.

Separate procedures are provided below for using HTTP or for using HTTPS and Secure Sockets Layer (SSL).

For more information about configuring SSL with Actuate products, see the *Security Guide for Siebel Business Applications*.

NOTE: If you are configuring your symbolic URLs to use HTTPS, you do not also need to change the Application Object Manager parameter Actuate Server Network Protocol Name to specify HTTPS.

For more information about symbolic URLs, see the *Siebel Portal Framework Guide*.

To define the external host and symbolic URLs using HTTP

1   Open the Siebel application.

2   From the application-level menu, choose Navigate > Site Map > Administration - Integration > WI Symbolic URL List.

3   From the visibility filter, select Host Administration.

4   Query for records where Virtual Name is *rshost*.

5   In the Name field, enter the name of the Actuate Active Portal JSP machine and the Actuate Active Portal JSP port number to use (for example, server1:8700).

   NOTE: Do not change the value in the Virtual Name field.

   8700 is the default port for the Actuate HTTP Server for HTTP.

6   Save the record.

To define the external host and symbolic URLs using HTTPS

1   Open the Siebel application.

2   From the application-level menu, choose Navigate > Site Map > Administration - Integration > WI Symbolic URL List.

3   From the visibility filter, select Host Administration.

4   Query for records where Virtual Name is *rshost*.

5   In the Name field, enter the name of the Actuate Active Portal JSP machine and the Actuate Active Portal JSP port number to use (for example, server1:8443).

   NOTE: Do not change the value in the Virtual Name field.

   8443 is the default port for the Actuate HTTP Server for HTTPS—that is, the port that the Actuate HTTP Server will use to pass through the SSL.

6   Save the record.

7   From the visibility filter, select Symbolic URL Administration.

8   Query for records where URL contains *rshost*.

   The records retrieved have the same host name (such as server1:8443) as specified in Step 5.

9   Change *http* to *https* in each of the URLs retrieved.

   Save the changes and log out of the Siebel application.

10 Log in to the Siebel application and generate and view a report.

Enabling the Siebel Reports Server with the Siebel Web Client

This section describes how to set up the various parameters for enabling the Siebel Reports Server for the Siebel Web Client.

For more information on how to modify Application Object Manager parameters, see the *Siebel System Administration Guide*.

To configure the Reports Server parameters for the Application Object Manager

1 From the application-level menu, choose Navigate > Site Map > Administration – Server Configuration > Servers.

The screen that appears displays three different list applets. The top applet lists the Siebel Servers for the enterprise. The middle applet has three tabs—Components, Parameters and Events. The bottom applet has two tabs—Events and Parameters.

2 In the top list applet, select the Siebel Server that you want to configure.

3 In the middle applet, click the Components tab.

This list applet contains the components for the Siebel Server selected in the top applet.

Choose the relevant Application Object Manager.

4 In the bottom applet, click the Parameters tab.

This list applet contains the parameters for the Component selected in the middle applet.

5 Change the following parameters:

`Actuate Server Connect String` = Connect string for a Siebel Server (where load balancing is not deployed) is:

> `siebel.TCPIP.none.none://`*SiebelServerHost*:*SCBPort*/*EnterpriseServerName*/ *XXX*`ObjMgr_`*language*

where:

- `siebel.TCPIP` = Networking protocol

- `none.none` = The encryption type and compression type

- *SiebelServerHost* = Name of the host on which the Siebel Server is installed

- *SCBPort* = Listening port number for the SCBroker component (use 2321 for the SCBPort)

- *EnterpriseServerName* = Name of your Siebel Enterprise Server

- *XXX*ObjMgr_*language* = Type of Object Manager and Language Pack for the Siebel Business application you are installing, for example:

  ❏ `SCCObjMgr_enu` for Siebel Call Center Object Manager for U.S. English

  ❏ `PManagerObjMgr_enu` for Siebel Partner Manager Object Manager for U.S. English

`Actuate Server Enable Flag` = True

`Actuate Server Network Protocol Name` = Name of protocol to use for viewing reports (example: HTTP)

`Actuate Server Report Server Host` = Valid formats for this parameter are:

■ If using an IP Address to refer to the Actuate Server Report Server Host, then include the Encyclopedia volume name for this parameter.

IP Address:Port Number/Encyclopedia volume name (example: 1.160.10.240:8000/volume1)

■ If the Actuate Server Report Server Host name is different from the Encyclopedia volume name, then the Encyclopedia volume name must be included for this parameter.

Actuate Server Report Server Host:Port Number/Encyclopedia volume name (example: server1:8000/volume1)

■ If the Actuate Server Report Server Host name and the Encyclopedia volume name are the same, then the Encyclopedia volume name is not included for this parameter.

Actuate Server Report Server Host:Port Number (example: server1:8000)

NOTE: By default, if the Encyclopedia volume name is not specified, it is assumed to be the same as the ReportServerHost.

`Actuate Server Rox Directory` = /Siebel Reports/

NOTE: Setting the `Actuate Report Cast Domain` and `Actuate Server Report Cast Host` parameters is no longer required.

6 Save changes and restart the component or the Siebel Server.

Enabling the Siebel Reports Server with the Siebel Developer Web Client

This section describes how to modify configuration files, such as siebel.cfg, on the Developer Web Client to enable the Siebel Reports Server.

NOTE: This content is provided for troubleshooting purposes only. Using reports with the Developer Web Client is not supported for end user deployment.

To configure the Siebel Reports Server with the Siebel Developer Web Client

1 Navigate to the BIN*language* subdirectory of your Siebel Business Applications installation directory.

where:

■ *language* = The Siebel code for the Language Pack you installed; for example, ENU for U.S. English.

2 Locate and open the appropriate configuration (CFG) file.

3 Using your default text editor, edit the following parameters in the [ActuateReports] sections.

[ActuateReports]

EnableReportServer = TRUE

ReportServerHost = Valid formats for this parameter are:

■ If using an IP Address to refer to the Reports Server Host, then you need to include the Encyclopedia volume name for this parameter.

IP Address:Port Number/Encyclopedia volume name (example: 1.160.10.240:8000/volume1)

■ If the Reports Server Host name is different from the Encyclopedia volume name, then the Encyclopedia volume name must be included for this parameter.

ReportServerHost:Port Number/Encyclopedia volume name (example: server1:8000/volume1)

■ If the Reports Server Host name and the Encyclopedia volume name are the same, then the Encyclopedia volume name does not need to be included for this parameter.

ReportServerHost:Port Number (example: server1:8000)

NOTE: By default, if the Encyclopedia volume name is not specified, it is assumed to be the same as the ReportServerHost.

ReportCastHost = No longer required

ReportCastDomain = No longer required

ProtocolName = Name of protocol to use for viewing reports (example: HTTP)

RoxDir = /Siebel Reports/

ConnectString = Connect string for an Application Object Manager (where load balancing is not deployed) is:

siebel.TCPIP.none.none://*SiebelServerHost*:*SCBPort/EnterpriseServerName/XXX*ObjMgr_*language*

where:

■ siebel.TCPIP = Networking protocol

■ none.none = The encryption type and compression type

■ *SiebelServerHost* = Name of the machine on which the Siebel Server is installed

■ *SCBPort* = Listening port number for the SCBroker component (default is 2321)

■ *EnterpriseServerName* = Name of your Siebel Enterprise Server

■ *XXX*ObjMgr_*language* = Type of Object Manager and Language Pack for the Siebel Business application you are installing, for example:

❏ SCCObjMgr_enu for Siebel Call Center Object Manager for U.S. English

❏ PManagerObjMgr_enu for Siebel Partner Manager Object Manager for U.S. English

Using Load Balancing with the Siebel Reports Server

The Siebel application includes a native load balancing feature. You will need to map the Siebel Servers being load balanced to the Reports Server using the following instructions.

To map the Siebel Servers to the Reports Server

1 Generate or copy the load balancing configuration file (lbconfig.txt) to the Reports Server host.

See "Managing Load Balancing for Siebel Applications" on page 130 for more information about the lbconfig.txt file.

2 Navigate to the Reports Server installation directory (for example, D:\sea_thirdparty_78x\Actuate7\Server) and locate the rptsrvr.cfg file.

3 Edit two parameters in the rptsrvr.cfg file as follows:

EnableVirtualHost = True

VirtualHostFile = <location of lbconfig.txt>

4 Type the load balanced connect string in the Actuate Server Connect String parameter field in the Application Object Manager or in the ConnectString parameter in the appropriate CFG file.

For an example of a load balanced connect string, see the eapps.cfg file.

5 Restart the Siebel Server or the Siebel Developer Web Client for the change to take effect.

For information on setting up third-party HTTP load balancers, see "Managing Load Balancing for Siebel Applications" on page 130.

Testing the Siebel Reports Server from the Siebel Web Clients

Complete the instructions that follow to test the Siebel Reports Server from the Siebel Web Clients.

To test Siebel Reports Server from the Siebel Web Client

1 Start any Siebel Business Application (for example, Siebel Sales).

The application's home page appears.

2 From the application-level menu, choose Navigate > Site Map > Accounts > Accounts > My Accounts.

3 Choose Accounts List from the link bar.

4 Click Reports and, from the drop-down list, select Account List.

5 The program starts generating the report and displays the output in your browser window.

If the report does not appear, check the order and location in which the Siebel Reports Server components are installed, as described earlier in this chapter.

To test the Siebel Reports Server from the Siebel Developer Web Client

1 Start any Siebel Business application (for example, Siebel Sales) from the Developer Web Client and connect to the server.

The application's home page appears.

2 From the application-level menu, choose Navigate > Site Map > Accounts > Accounts > My Accounts.

3 Choose Accounts List from the link bar.

4 Click Reports and, from the drop-down list, select Schedule.

The Schedule a Report dialog box appears.

5 From the drop-down list, select Account List and click Schedule.

6 Indicate that you want to schedule the report to run once a few minutes later, specify the date, and time.

Click Submit.

The Action status window appears, stating that the job ACLIST was successfully submitted.

7 From the application-level menu, choose Navigate > Site Map > Reports Server > My Jobs.

8 Click the Scheduled tab.

The scheduled request appears in the view, indicating the scheduled date, time, and other information.

Synchronizing Siebel Users to the Reports Server

Synchronization is the process of creating accounts for Siebel users on Actuate iServer and is required for users to run, schedule, and view reports in Reports Server views.

To synchronize Siebel users to the Reports Server

1 Log in to the Siebel Business application as the Siebel Reports Administrator.

2 From the application-level menu, select Navigate > Site Map > Reports Server > User Administration.

NOTE: The recommendation is to synchronize users in smaller buckets, particularly when a large number of users is synchronized.

3 With the first user highlighted, click Synchronize One.

The Siebel Users window appears.

4 Type the Reports Administrator user name and password.

A confirmation message, stating that the user was successfully added to the Reports Server, appears in the Siebel Users window.

5 For the remaining users, click Synchronize All.

NOTE: You will not see the Siebel Users login window again as long as you remain in the same view.

After the users have been synchronized, a confirmation window appears, displaying the total number of new user accounts added to the Reports Server. This confirmation message may also include the number of users already found to exist on the Reports Server.

6 If users are being synchronized in smaller buckets, repeat .

Before synchronizing Siebel users, the Reports Administrator must create an account on the Actuate iServer, using an account name that has Siebel administrator privileges, such as SADMIN, and assign the administrative role to that account by using Actuate Management Console.

The administrator should review the *Administering Actuate iServer System* manual before setting up an account for the administrator using Actuate Management Console.

NOTE: If the database is refreshed, the Siebel Reports administrator should perform the user synchronization again to make sure that the Reports Server passwords for these users, which are stored in the Siebel Database, match what is stored in the Actuate iServer.

Synchronizing Locale-Sensitive Parameters

For the Reports Server to format reports based on user-specified locale, the locale definitions in localemap.xml file should match the equivalent parameters in the Siebel Application Object Manager.

For more information about setting parameters for Application Object Managers, see the *Siebel System Administration Guide*.

Verify that the locale-specific parameters in the localemap.xml file match the corresponding parameters in the Application Object Manager. For a list of these parameters, see the *Siebel Reports Administration Guide*.

Clustering Siebel Reports Server

For the Siebel Business Applications, installing the Siebel Reports Server in a clustered environment is supported using the Actuate Management Console.

To implement clustering with the Siebel Reports Server

1 Install the Actuate iServer and Management Console for Siebel component on each node being clustered, following the instructions in .

2 Stop the Actuate Management Console HTTP Service on each node, following the instructions in .

3 Continue implementing clustering on the Reports Server, using the information in the *Deployment Planning Guide*.

13 Installing Siebel EAI Connector Software

This chapter describes the steps involved in installing Siebel EAI Connector support files. It includes the following topics:

- "Process of Installing EAI Connector Software" on page 249
- "Preinstallation Considerations for EAI Connectors" on page 249
- "Installing the Siebel EAI Connector Support Files" on page 250

Process of Installing EAI Connector Software

Installing the EAI Connector consists of multiple tasks that you should perform in the following sequence:

1 Review preinstallation considerations. See "Preinstallation Considerations for EAI Connectors" on page 249.

2 Install Siebel EAI Connector software. See "Installing the Siebel EAI Connector Support Files" on page 250.

3 Configure Siebel EAI Connector software.

For instructions on how to configure Siebel EAI Connector software, refer to Siebel documentation on the appropriate connector:

- *Siebel Connector for Oracle Applications*
- *Siebel Connector for Siebel Business Applications*

Preinstallation Considerations for EAI Connectors

Additional configuration is required if you plan to use Siebel Connector for Oracle Applications against multiple instances of the Oracle back-office application. Please contact Siebel Technical Support for configuration instructions.

NOTE: Siebel Connector for Oracle Applications supports all Siebel 7 operating systems.

For list of supported platforms, see *System Requirements and Supported Platforms* on Siebel SupportWeb.

Installing the Siebel EAI Connector Support Files

Complete the following steps to install the Siebel EAI Connector support files on each server machine, using the information you recorded in your copy of the worksheet in Appendix A, "Deployment Planning Worksheet."

NOTE: The following procedure is for installing the base product. For patch installation instructions, refer to the *Maintenance Release Guide* provided with the patch. See also "About Installing Siebel Releases" on page 15.

To install the Siebel EAI Connector support files

1 Open a new shell and navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

   For example, for Solaris, navigate to *Siebel_Image*/Solaris/Server/Siebel_Enterprise_Server.

   where:

   ■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as /Siebel_Install_Image/7.8.2.0.

2 Unset any Siebel-related environment variables, such as $*SIEBEL_ROOT*.

3 Enter the following command. Optionally, append any flags described in "Additional Flags for Installation Commands" on page 95.

   `./setupUNIX_OS`

   The Installer Welcome screen appears.

4 Click Next.

   If you have installed other Siebel components of the same version on the same machine, the installer displays the message that an existing installation has been found.

5 Depending on whether you are installing your EAI files for the first time or adding a new language to an existing instance, take the appropriate action, then click Next:

   ■ To install the server software in a new instance, select None as the default and click Next. Proceed to Step 6 on page 250.

   ■ To install a new language in an existing instance, select the displayed instance and click Next. Proceed to Step 8 on page 251.

   For additional information about installing multiple Language Packs, see "Siebel Server Installation Requirements" on page 112.

   The Installer Path screen appears.

6 Enter the fully qualified path to the $*SIEBEL_ROOT* directory and click Next.

   The Component Selection screen appears.

7 Select EAI Connector.

The Setup Type screen appears.

8 Choose the type of installation to execute from the following options; then click Next to continue:

- ■ **Typical.** To install all components.

- ■ **Compact.** To install only those components necessary, but no additional components or help.

- ■ **Custom.** To customize your installation by choosing the specific components you want to install.

The Directory Location screen appears.

9 Review the information and click Next to continue or Back to change the directory location.

If you have not installed Siebel Gateway Name Server or Siebel Server, the Language Selection screen appears.

10 Select the languages for this server and click Next.

All servers are installed with at least one language, the primary (base) language. Additional languages can be installed at a later date, if desired. When installing languages at a later date, you must also reinstall any patch releases that were previously installed.

NOTE: Before you install Language Packs, see the information about code pages in "Planning RDBMS Installation and Configuration" on page 22.

The Installation Verification screen appears.

11 To copy the files for the selected product into the installation location, click Next.

The Installer Progress screen appears.

The installer proceeds to install the specified files.

The Installer Language Pack Progress screen appears.

12 Click Finish.

For Siebel EAI product configuration tasks, refer to the appropriate Siebel EAI Connector documentation on the *Siebel Bookshelf*.

14 Installing the ChartWorks Server

This chapter describes installation and postinstallation tasks for the ChartWorks Server for use with Siebel Business Applications. The ChartWorks Server provides the functionality for the basic appearance of charts used in a variety of Siebel Business Applications. This chapter includes the following topics:

■ "Process of Installing the ChartWorks Server" on page 253

■ "Installing the ChartWorks Server" on page 253

■ "Configuring the ChartWorks Server" on page 255

■ "Changing the ChartWorks Server for a Web Client" on page 256

Process of Installing the ChartWorks Server

Installing the ChartWorks Server consists of multiple tasks that you should perform in the following sequence:

1 Review preinstallation requirements. For general requirements, see Chapter 2, "Preparing for Installation." See also the *ChartWorks Server Installation Guide* by Visual Mining, Inc., on the *Siebel Business Applications Third-Party Bookshelf*.

2 Install ChartWorks Server. See "Installing the ChartWorks Server" on page 253.

3 Configure ChartWorks Server. See "Configuring the ChartWorks Server" on page 255.

4 (Optional) Change the ChartWorks Server specified for a Web client. See "Changing the ChartWorks Server for a Web Client" on page 256.

Installing the ChartWorks Server

The information in this section supplements the installation instructions provided by Visual Mining, Inc., which are provided in the *Siebel Business Applications Third-Party Bookshelf*. It is not intended to replace them.

You can install ChartWorks Server on any server in your local area network, as long as that server is able to ping a Siebel Server. Typically, it is installed on the Siebel Server. If ChartWorks Server is not installed on the Siebel Server, it should be installed on the same subnet as the Siebel Server. Install at least one ChartWorks Server per Enterprise, and, preferably, one ChartWorks Server per Siebel Server. No additional license key is required for ChartWorks Server.

ChartWorks software is installed with the Siebel Mobile Web Client. The associated Windows service starts automatically when a chart is accessed within the client.

To install ChartWorks Server

1 Review preinstallation requirements. See the *ChartWorks Server Installation Guide* by Visual Mining, Inc., on the *Siebel Business Applications Third-Party Bookshelf*.

2 Log on to the server with root permissions.

3 Open a new shell and navigate to the Siebel image location for the current software version. Then navigate to the directory where the installer is located.

For example, for Solaris, navigate to *Siebel_Image*/Solaris/Server_Ancillary/ Chartworks_Server/*language*/unix.

where:

- ■ *Siebel_Image* = The directory for your version-specific Siebel network image, such as /Siebel_Install_Image/7.8.2.0.

- ■ *language* = The three-letter code for the language of your Siebel Business Applications product; for example, enu for U.S. English.

4 Create a directory into which you will install ChartWorks Server (for example, /usr/local/cws). You will specify this directory in Step 8 on page 254.

5 Create a temporary directory (for example, /tmp/cws) and copy into that directory the tar file appropriate to your UNIX operating system. The file will be one of the following:

chartworksserver3.7.siebel.aix.tar

chartworksserver3.7.siebel.hp.tar

chartworksserver3.7.siebel.sol.tar

6 Uncompress the tar file by entering:

tar -xvf *file_name*

NOTE: On AIX, using GNU TAR is preferable to using AIX TAR, because the latter truncates long class names.

7 Enter ./server.sh.

8 When prompted, specify the installation directory you created in Step 4 on page 254 (for example, /usr/local/cws), and press Enter.

9 When prompted to install Sun JRE, type Y and press Enter.

10 Accept the license agreement for Sun JRE.

11 (Optional) If you want to be able to access the online documentation for ChartWorks Server, enter the full path to your installed browser (for example, /usr/bin/netscape/netscape), and press Enter. If no browser is installed on this machine, leave this option blank.

12 Accept the license agreement for ChartWorks Server.

13 When prompted for a serial number for ChartWorks Server, press Enter.

14 When prompted to install support for Oracle, enter Y and press Enter.

15 When prompted to install support for Sybase, enter N and press Enter.

16 When prompted whether to start ChartWorks Server the next time the server machine is rebooted, enter Y and press Enter.

17 After all files have been copied by the installer, manually copy the files DynamicChartResource.class and ResourceFactory.class, which are located with the Visual Mining ChartWorks Server installer, to the following directory:

VISUALMINING_INSTALL_ROOT/ChartWorksServer3.7/root/classes/netcharts/util

18 For the rest of the installation, follow the instructions in *ChartWorks Server Installation Guide* by Visual Mining, Inc., available on the *Siebel Business Applications Third-Party Bookshelf*.

NOTE: The Solaris installation instructions are valid for AIX and HP-UX platforms.

Configuring the ChartWorks Server

The Siebel Server configuration prompts you to set certain parameters related to communications with the ChartWorks Server. For instructions on installing Siebel Server, see Chapter 7, "Installing the Siebel Server."

Following installation of ChartWorks Server software, you must configure the ChartWorks Server, regardless of your UNIX platform.

To configure ChartWorks Server

1 Navigate to your installation directory for ChartWorks Server; for example:

$*CHARTWORKS_SERVER_HOME*/root/Charts

2 Create a new subdirectory called Siebel.chart.

3 Within the new Siebel.chart subdirectory, create a new file, using vi, and type the following three characters in uppercase but without a carriage return:

CDL

4 Save the file as Siebel.cdx.

5 Make sure the `DefaultChartFont` parameter in your configuration file and the `Application Default Chart Font` parameter in your component definition of your Application Object Manager are set to a font that is available on your machine; for example, Verdana-10-Normal or hp_roman8 (for CSY language on HP-UX). A default font is used by ChartWorks if no font is defined for the chart or if the font defined for the chart is not available on the UNIX machine.

6 If you are using the Sun Java System Web Server, verify that JavaScript is enabled on the Web server. ChartWorks will not run if JavaScript is disabled, and you will get the following error message:

```
An error occurred while sending a request to the chart server
```

7 If you are running Siebel Server on HP-UX, complete the following additional step:

■ Copy the file NFUtil.class, which is located in the same directory as the Visual Mining ChartWorks Server installer, to the following directory:

VISUALMINING_INSTALL_ROOT/server/root/classes/netcharts/util/

NOTE: Specifying nohup (nohup ./ChartWorksServerControl start) to start the ChartWorks server prevents the ChartWorks Server process from being killed when the account owner logs off.

Changing the ChartWorks Server for a Web Client

The installation script prompts for the ChartWorks server location and provides the default value of the localhost. You can change the ChartWorks Server specified for an Enterprise by using the Server Administration UI after you install client applications.

To specify the ChartWorks Server for Web clients

1 Log in as the Siebel Administrator.

2 Choose Navigate > Site Map > Administration - Server Configuration > Enterprises.

3 Click the Profile Configuration view tab.

4 Select the named subsystem, Server Datasource (ServerDataSrc).

5 In the Profile Parameters list at the bottom of the screen, set the value of the parameter DSChartServer to the name of the machine on which you are running the ChartWorks Server. This parameter specifies the ChartWorks connect string.

You initially specify the ChartWorks connect string when you configure the Siebel Server, as described in "Installing and Configuring the Siebel Server" on page 117.

6 Set the value of the parameter DSChartImageFormat to png, jpg, or gif. The default is png.

You initially specify the chart image format when you configure the Siebel Server, as described in "Installing and Configuring the Siebel Server" on page 117.

NOTE: For a Siebel Mobile Web Client, set the equivalent parameter, ChartImageFormat, in the configuration file for the Siebel application, such as uagent.cfg for Siebel Call Center.

15 Uninstalling Siebel Applications

This chapter provides instructions for uninstalling Siebel applications. It includes the following topics:

- *"About Uninstalling Siebel Applications" on page 257*
- *"Uninstalling Earlier Versions of Siebel Applications" on page 257*
- *"Uninstalling Siebel Servers or the Siebel Enterprise" on page 258*
- *"Uninstalling Siebel Servers or the Siebel Enterprise, Using srvredit" on page 259*
- *"Uninstalling Non-Enterprise Servers or the SWSE" on page 260*
- *"Uninstalling Siebel Reports Server" on page 261*
- *"Uninstalling Siebel Clients" on page 262*
- *"Uninstalling Siebel Tools" on page 262*
- *"Uninstalling Resonate Central Dispatch" on page 262*
- *"Troubleshooting Uninstallation" on page 263*

About Uninstalling Siebel Applications

The uninstallation process is based on the Siebel products installed in a specific directory. You can run the uninstaller script ($*SIEBEL_ROOT*/_uninst/ses/uninstall.ksh) to uninstall a specific product installed under the uninstaller's parent directory.

Uninstallation procedures for clustered nodes constitute the only exception to the process described above. For information about this type of uninstallation, see the *Deployment Planning Guide*.

When migrating to a new version of Siebel Business Applications, refer to the instructions in the *Upgrade Guide*. If you are migrating to a new database platform, consult Siebel Expert Services.

CAUTION: To successfully uninstall, you must use the uninstaller created during the installation process. Do not delete Siebel product directories to uninstall products.

Uninstalling Earlier Versions of Siebel Applications

To uninstall an earlier version of Siebel Business Applications, you must use the certified uninstallation method for that version.

- For uninstallation information for version 7.7.x, see version 7.7 of the *Siebel Installation Guide* for the operating system you are using.

■ For uninstallation information for versions 6.x.x, 7.0.x, and 7.5.x, see the appropriate version of the *Siebel Server Installation Guide* for your platform. See also the *Siebel Web Client Administration Guide*, *Siebel Tools Reference*, or other applicable titles for these versions.

Uninstalling Siebel Servers or the Siebel Enterprise

To uninstall version 7.8, you must either be the same user or in the same group as the user who performed the installation.

CAUTION: When uninstalling servers, always uninstall the Siebel Gateway Name Server last, after all Siebel Servers in the Siebel Enterprise have been removed, and only stop the Siebel Server; the Uninstallation Wizard automatically stops the Siebel Gateway Name Server. If you do stop the Siebel Gateway Name Server prior to uninstall, you will receive the following error message: Errors were encountered while changing the configuration in the following steps: RmNSDef, RmNSEntDef.

NOTE: You cannot uninstall Language Packs selectively from your servers. If you must uninstall a particular Language Pack, you must uninstall the Siebel Server on which it is installed and reinstall it with the correct Language Pack or Packs.

To uninstall a Siebel Server

1 Stop the Siebel Server process.

2 Open a new shell.

3 Navigate to $*SIEBEL_ROOT*/_uninst and enter the following command:

   uninstall.ksh ses *optional_arguments*

where:

■ *optional_arguments* = Any valid arguments that can be passed to the uninstaller, such as -is:javaconsole -console to run in console mode.

NOTE: If you want to uninstall an incomplete or unsuccessful installation and you do not see the _uninst file in the $*SIEBEL_ROOT* directory, contact Technical Support for assistance.

The Uninstaller screen appears, listing the products installed in this directory.

4 From the Uninstaller screen, choose the products to uninstall and click Next.

NOTE: If you have Siebel Gateway Name Server, Siebel Server, and Siebel Database Server all installed into $*SIEBEL_ROOT* and want to uninstall all of them, you can select all of them on this screen.

The Uninstaller Verification screen appears.

5 Verify the products to be uninstalled and click Next.

The Uninstaller Progress screen appears, showing the progress of file removal.

6 When the Uninstaller displays the Uninstaller Success screen, click Finish.

To uninstall a Siebel Gateway Name Server

1 Stop the Siebel Gateway Name Server process.

2 Open a new shell.

3 Navigate to $*SIEBEL_ROOT*/_uninst and enter the following command:

    uninstall.ksh ses *optional_arguments*

where:

■ *optional_arguments* = Any valid arguments that can be passed to the uninstaller, such as -is:javaconsole -console to run in console mode.

NOTE: If you want to uninstall an incomplete or unsuccessful installation and you do not see the _uninst file in the $*SIEBEL_ROOT* directory, contact Technical Support for assistance.

The Uninstaller screen appears, listing the products installed in this directory.

4 From the Uninstaller screen, choose Siebel Gateway Name Server and click Next.

NOTE: Make sure you have uninstalled all the Siebel Servers served by this Siebel Gateway Name Server before continuing.

The Uninstaller Verification screen appears.

5 Verify the products to be uninstalled and click Next.

The Uninstaller Progress screen appears, showing the progress of file removal.

6 When the Uninstaller displays the Uninstaller Success screen, click Finish.

Uninstalling Siebel Servers or the Siebel Enterprise, Using srvredit

You can use srvredit, a command-line utility, to remove a Siebel Server or to remove a Siebel Enterprise, as illustrated in the following procedures.

To uninstall Siebel Server

■ Enter:

    srvredit -g *SiebelGateway* -e *SiebelEnterprise* -s *SiebelServer* -x \$Server

To uninstall the Siebel Enterprise

■ Enter:

    srvredit -g *SiebelGateway* -e *SiebelEnterprise* -x \$*Enterprise*

NOTE: You cannot use srvredit to remove files.

Uninstalling Non-Enterprise Servers or the SWSE

The process for uninstalling the Siebel Database Server, Siebel Web Server Extension (SWSE), and EAI Connector files is virtually identical to the uninstallation of the Siebel Server, except the parameter you provide will be different.

To uninstall these products

■ Enter the following:

uninstall.ksh *product_name optional_arguments*

where:

■ *product_name* = The code for the product you want to uninstall:

❑ eappweb (for the SWSE)

❑ encryption (for Strong Encryption Pack)

❑ ses (for the Siebel Enterprise Server components such as Siebel Gateway Name Server, Siebel Server, Siebel Database Server, EAI, and Siebel Sync Server)

❑ thirdparty (for Siebel Reports Server)

For example:

uninstall.ksh eappweb

uninstall.ksh ses -is:javaconsole -console

uninstall.ksh ses -args SS_SETUP_INI=test.ini

For additional uninstallation information regarding the SWSE, see .

Restoring a Web Server After Uninstalling the SWSE

After uninstalling your SWSE, you can restore your Web server using the following procedure.

To restore your Web server

1 Copy all the backup configuration files, created during installation, referenced in the following example to their original location under the Web server directory.

config_file_name_backup_timestamp.bak

For example:

obj_conf_020714204932.bak

■ **Solaris**

❑ start

- ❑ config/mime.types

- ❑ config/obj.conf

- ❑ config/magnus.conf

■ **AIX and HP-UX**

- ❑ conf/httpd.conf

- ❑ conf/mime.types

2 **(HP-UX only)** Reset any existing LANG variable to the actual directory that the symbolic link represents. If the environmental variable LANG is set to a directory name that is a symbolic link, the Java uninstaller for Siebel Server will fail.

NOTE: The LANG variable cannot be set to univ.utf8. This causes the uninstaller to fail.

Uninstalling Siebel Reports Server

Review the following procedure when uninstalling the Siebel Reports Server software.

To uninstall Siebel Reports Server

1 Stop the Actuate Process Management Daemon 7 process.

2 Open a new shell.

3 Navigate to $SIEBEL_ROOT/_uninst and enter the following command:

uninstall.ksh thirdparty *optional_arguments*

where:

■ *optional_arguments* = Any valid arguments that can be passed to the uninstaller, such as -is:javaconsole -console to run in console mode.

You can append additional arguments to your command. For more information, see "Additional Flags for Installation Commands" on page 95.

NOTE: If you want to uninstall an incomplete or unsuccessful installation and you do not see the _uninst file in the $SIEBEL_ROOT directory, contact Technical Support for assistance.

The Uninstaller screen appears, listing the products installed in this directory.

4 From the Uninstaller screen, choose the products that you want to uninstall and click Next.

NOTE: You can choose to uninstall all Reports Server products at the same time, or you can choose to uninstall products individually.

The Uninstaller Verification screen appears.

5 Verify the products to be uninstalled and click Next.

The Uninstaller Progress screen appears, showing the progress of file removal.

6 When the Uninstaller displays the Uninstaller Success screen, click Finish.

Uninstalling Siebel Clients

To uninstall Siebel application client software (Siebel Mobile Web Client, Siebel Developer Web Client, or Siebel Sample Database) on Windows systems, run the Siebel Systems Uninstallation Manager from the Windows Add or Remove Programs panel.

Any file that is updated by a user after installation is not deleted. After uninstallation, files remaining in the client installation directory can be safely deleted at the discretion of the administrator.

NOTE: If you installed the Siebel Sample Database, you must uninstall it separately before you uninstall the Siebel client where you installed the Sample Database. Otherwise you will be unable to uninstall the Sample Database.

Uninstalling Siebel Tools

To uninstall Siebel Tools, run the Siebel Systems Uninstallation Manager from the Windows Add or Remove Programs panel.

NOTE: You can install Siebel Tools only on the Microsoft Windows platform.

Any file that is updated by a user after installation is not deleted. After uninstallation, files remaining in the directory can be safely deleted, at the discretion of the administrator.

Uninstalling Resonate Central Dispatch

Resonate Central Dispatch, a third-party load-balancing product previously required in all 7.0.x and 7.5.x Siebel Enterprise deployments, is desupported as of Siebel 7.7.

For information on configuring load balancing for Siebel software, see "Managing Load Balancing for Siebel Applications" on page 130.

To uninstall Resonate Central Dispatch from a server

1 Stop Web servers and Siebel Server processes on the server.

2 Clean up any orphaned scheduling rule as necessary. For details, see the *Resonate Central Dispatch User Guide*.

3 Verify that CDAgent processes are running on all nodes so Resonate site would operate properly.

4 Log in to the Dispatch Manager.

5 Stop the Resonate site.

6 Remove the server from the Resonate site and save the changes. For details, see the *Resonate Central Dispatch Resonate Commander Installation Guide* for the operating system you are using.

7 Check the logs to make sure the Resonate RXP Driver (Kernel module in UNIX) are removed properly. If not, remove the RXP components manually. Not removing the RXP module properly may affect future networking operations.

8 Uninstall Resonate software from the server using the Resonate uninstall tools. For details, see the *Resonate Central Dispatch Resonate Commander Installation Guide* for the operating system you are using.

Troubleshooting Uninstallation

Uninstallation is usually straightforward when the previous installation instructions have been followed correctly. This section describes how to recover from a failed uninstallation as well as some Windows anomalies that can affect the uninstallation of previous versions of Siebel applications.

Recovering from a Failed Uninstallation

If you encounter any issue with the uninstallation process, you can run the uninstallation again. This uses the backup made by the uninstaller under the backup directory (ses_BAK) to reconstruct your original installation. You can then address the cause of the failure and run the uninstallation for a third time to complete the uninstallation process.

NOTE: The recovery mechanism can be used only if the uninstallation process fails. It cannot be used to undo a successful uninstallation.

Uninstalling Siebel 6

Customers uninstalling version 6.x Siebel applications under Microsoft Windows may experience a failure to uninstall due to a bug in the versions of InstallShield used.

You most likely have this problem if you receive the following message while attempting to uninstall:

    Setup failed to run installation

To determine which version of InstallShield resides on a given machine

1 Navigate to:

    C:\Program Files\Common Files\InstallShield\engine\6\Intel 32

2 Select ikernel.exe and right-click to display Properties.

3 Select the Version tab to locate the version of the InstallShield engine residing on the machine.

You can prevent this behavior from occurring when uninstalling Siebel 6 by downloading a utility created for this purpose from the InstallShield Web site.

The utility guarantees that the target machine for uninstallation has a proper and known state. It renames the current InstallShield engine and removes associated registry entries from the target machine, so that when Siebel applications uninstallation starts, the program validates that the correct InstallShield engine version (6.0.x) exists in that location.

NOTE: Siebel Systems takes no responsibility for the state if a client machine is left after running this utility. This utility is provided by InstallShield to address a known behavior caused by that vendor's product defect. Therefore, use this utility with discretion and make sure that you thoroughly test it before you distribute it to your users.

You may use this utility on any of the following occasions:

■ Prior to installing Siebel eBusiness Applications, release 6.x products (when you are upgrading from Siebel Enterprise Applications, release 4.x or earlier to release 7).

■ Prior to installing Siebel eBusiness Applications, release 6.x patch releases.

■ Prior to uninstalling Siebel eBusiness Applications, release 6.x products.

Another way of solving this problem is to install a product that uses the desired version of InstallShield.

Uninstallation Manager Anomaly

Due to a known anomaly on Windows NT 4.0, the Uninstall Manager occasionally does not appear under Add/Remove Programs. If this occurs, refer to Alert 143 on Siebel SupportWeb.

16 Verifying Your Server Environment

This chapter provides information about verifying your system using the Environment Verification Tool (EVT). It includes the following topics:

About the Environment Verification Tool (EVT)

The Environment Verification Tool (EVT) is a tool intended to help system administrators verify the configuration of the Siebel Business Applications environment. System administrators can use the EVT utility to identify errors and potential problems in the Siebel Enterprise after installation in a development or test environment, or following rollout or upgrades.

It is recommended to use EVT to verify your Siebel applications environment.

The EVT utility is included with the installed software for Siebel Server, Siebel Gateway Name Server, and Siebel Web Server Extension (SWSE). It is provided for each supported Siebel Enterprise Server platform.

EVT uses various operating systems utilities and Siebel command-line utilities to query information about Siebel components' installation and configuration settings.

EVT verifies that the machines running Siebel software are configured correctly and according to *System Requirements and Supported Platforms* on Siebel SupportWeb.

What Products Can EVT Check?

You can run EVT against Siebel products and some third-party products, as follows:

Siebel Products

- Siebel Gateway Name Server
- Siebel Server
- Siebel Web Server Extension

Third-Party Products

■ Web server (Microsoft IIS, IBM HTTP Server, Sun Java System Web Server, or HP Apache Web Server)

■ Database

EVT Check Groups

The EVT engine is driven by a configuration file (evt.ini). This file is specific for each version and cannot be used to run the utility against an earlier or a later version of the software. This file identifies the default checks that need to be run, and also provides the dependency logic, such as operating system-specific checks or database-specific checks, between different checks. It can be customized to check for other issues as well.

If you want to create customized checks, create a copy of the original .ini file for this purpose, so that you do not accidentally affect EVT functionality.

You can use EVT to validate configuration settings in the following check groups:

■ Environment checks (ENV)

■ Siebel Server checks (SVR)

■ Database client checks (DBC)

■ Web server checks (WEB)

■ Database server (RDBMS) checks (DBS)

■ Internal checks (INT)

■ Network settings checks (NET)

■ Operating settings checks (OS)

■ Other checks (OTH)

About the EVT Configuration File

EVT uses a configuration file (evt.ini) to determine what checks it needs to perform and for each check what settings it should be checking for. Each Siebel release has a corresponding configuration file specific for that release. This file resides under the bin subdirectory of the $*SIEBSRVR_ROOT* directory on the Siebel Server, or of the *SWSE_ROOT* directory on the SWSE.

In the evt.ini file, the [Check*X*] sections contain check definitions for different check groups. Refer to the evt.ini file for descriptions of parameters used for each check section. A check definition can have the parameters shown in Table 24 on page 267. Not shown in the table are check-dependent parameters, such as PARAMNAME and PARAMVALUE.

Table 24.   EVT Check Definition Format

Parameter	Description
CHECKID	Unique identifier for each check definition.
CHECKGROUP	The area of the application environment that is verified by this check.
CHECKNAME	Name of the check to run.
SERVERTYPE	The server type on which the check can be run—either Siebel Server, Siebel Gateway Name Server, Web server with SWSE, or Database Server (RDBMS). For values, see "Optional EVT Command Line Flags" on page 271. SERVERTYPE can have multiple delimited values separated by commas, for example, SERVERTYPE=DBSERVER,SIEBSRVR,SWSE.
OSTYPE	The operating system applicable to this check. OSTYPE can have multiple delimited values separated by commas, for example, OSTYPE=AIX,HPUX,SOL,W32. For a list of supported operating systems for the current release, see *System Requirements and Supported Platforms* on Siebel SupportWeb.
DEPENDENCY	This feature is used to implement conditional logic in the .ini file, for example, checking for the right Oracle client version if Oracle is the RDBMS in use. DEPENDENCY can have multiple delimited values separated by commas, for example, DEPENDENCY=Check1,Check231.
PRIMARY	Determines whether this check must be printed as part of the output. Checks implemented only to fulfill a dependency are not printed in the output if they prevent the next check from succeeding.

Table 24.   EVT Check Definition Format

Parameter	Description
RESULTMODE	The value of RESULTMODE specifies how the check will be evaluated. Use one of the following values: ■ **evaluate.** Performs a text comparison and returns TRUE if the values are the same. ■ **inverted.** The opposite of evaluate. Returns FALSE where evaluate would return TRUE. ■ **versioncheck.** Evaluates version strings, including dotted version strings. ■ **invertedversioncheck.** The opposite of versioncheck. Returns FALSE where versioncheck would return TRUE.
ERRORLEVEL	This parameter uses two values—WARN and FAIL—to determine whether the failure of a particular check constitutes a critical failure or just a warning. Critical failures are misconfigurations that would result in the failure of Siebel software in one form or another, whereas warnings apply to misconfigurations that may result in reduced performance, but not necessarily a software failure.

All the parameters in the .ini file should be set to the alias and not the actual value; for example, PARAMNAME=Lang and PARAMVALUE=ENU.

You can use # (pound sign) in the evt.ini file to comment out specific lines.

You can also add new checks to the .ini file based on your business requirements using the parameters described in Table 24 on page 267. If you decide to do so, make a copy of the file and make your modifications in the new file. Then run EVT using the -f option, as described in "Optional EVT Command Line Flags" on page 271, to direct EVT to use the new configuration file.

Launching the EVT Utility

The EVT executable program is installed under the bin subdirectory of $SIEBSRVR_ROOT. The command name is evt.exe for Windows or evt for UNIX operating systems.

You can run this executable with different options selected, based on what part of your environment you want to check.

NOTE: For more information about using EVT, see also Technical Note 467 on Siebel SupportWeb.

Review the following topics to determine how to edit the evt.ini file and to use command-line options:

■ "About the EVT Configuration File" on page 266

■ "Optional EVT Command Line Flags" on page 271 (includes command examples)

■ "Available EVT Output Formats" on page 272

The evt.ini file contains all the approved checks. If you need to add any checks or modify any of the existing checks, make a copy of the file and make your modification in the new file. Then run EVT using the -f option, as described in "Optional EVT Command Line Flags" on page 271, to direct EVT to use the new configuration file.

To launch EVT

1 Verify that permissions for the EVT executable program are set to 755.

2 Navigate to $SIEBEL_ROOT$ and source the Siebel environment variables, using one of the following commands, depending on the type of shell you use:

Bourne or Korn shell

    . ./siebenv.sh

   TIP: Make sure there is a space between the initial period and ./siebenv.sh.

C shell

    source siebenv.csh

3 Make $SIEBSRVR_ROOT$/bin the current directory.

4 Enter an EVT command, as follows:

    ./evt

   NOTE: You can include any desired flags, as described in "Optional EVT Command Line Flags" on page 271.

Running EVT in Query Mode

EVT can also be run in query mode. This mode is intended to interface with other utilities that need to query the installation for information.

To run in query mode, you must use the –q flag. The –q flag must be accompanied by a properly formatted query string.

NOTE: In query mode, EVT ignores all other options except the –h.

The query string consists of *name=value* pairs delimited by the plus sign (+).

The output of EVT in this mode is either pass[] or fail[], with the current value of the parameter in brackets, where applicable. Examples for UNIX are shown below.

Example

    % evt -q "Checkname=VAR+ParamName=SIEBEL_ASSERT_MODE+ParamValue=0"

    fail[]

This command returns fail[] because SIEBEL_ASSERT_MODE is not set to 0 and its current value is [NULL].

Example
```
% evt -q "Checkname=UNDEFVAR+ParamName=SIEBEL_ASSERT_MODE"

pass[]
```

This command returns pass[]. Because we know that SIEBEL_ASSERT_MODE is not defined, we run an UNDEFVAR to check whether the variable is defined. As expected, this check passes and the current value is still [NULL].

Optional EVT Command Line Flags

You can run the EVT utility with various options as described in .

Table 25.   Command-Line Flags Used with EVT

Flag	Description
–h	Prints a help message with a list of all the flags you can use with the EVT utility.
–g	Name of the Siebel Gateway Name Server. If not provided, EVT picks up the name of the Siebel Gateway Name Server from the Siebel Server configuration file; for example, enu/siebel.cfg.
–s	Name of the Siebel Server. If not provided, EVT determines the name of the server from the directory tree.
–e	Name of the Enterprise Server. If not provided, EVT determines the name of the Enterprise Server from the Siebel Server configuration file; for example, enu/siebel.cfg.
–u	Username to use to log in to Server Manager. The default username is sadmin.
–p	Password to log in to Server Manager. The default password is sadmin. **NOTE:** If any of the srvrmgr parameters are provided incorrectly, EVT will not be able to check Siebel Server parameters. To print the details of root cause, use the –d SHOWERRORS flag.
–o	Format of the output. EVT can generate outputs in several formats: TEXT (default), TEXTFILE, HTML, and HTMLFILE.
–d	Run the script in debug mode. Supported debug levels are shown in order of verbosity, starting with the least verbose level (see examples of this flag as follows): **DEFAULT.** (Default) Prints only check for pass/fail/not executed. **EXPLAIN.** Prints description of what has been checked and why. If a check could not be run, no explanation is given. If a check executed and found an error, it would report the corrective actions to be taken. **SHOWERRORS.** Prints the same information as EXPLAIN, but, in addition, prints any errors encountered that prevented a check from executing. For example, if the check included verification of a particular file having been executed, but the file does not exist, SHOWERRORS provides the error that prevented execution. **SHOWCOMMENTS.** Prints the same out put as SHOWERRORS, but, in addition, prints more detailed information about how the check was implemented. This is essentially debug information, for example: Got value *A* from file *X.* **EVTLOG.** Prints the same output as SHOWCOMMENTS, but, in addition, prints the execution log for EVT. This output is primarily useful to EVT developers.
–l	Output directory to which reports are written.

Table 25.   Command-Line Flags Used with EVT

Flag	Description
-t	Type of server to check: ■ Siebel Server [SIEBSRVR] ■ Siebel Gateway Name Server [GTWYNS] ■ Database Server (RDBMS) [DBSERVER] ■ Siebel Web Server Extension [SWSE] For example, if -t SWSE is specified, then EVT runs only Web server-related checks (and those checks that can be run on any type of server, such as for JRE).
-f	Location of the evt.ini file. When EVT is launched, it verifies the existence of this file. By default, the evt.ini file is located in the same directory as the EVT executable program. If the evt.ini file is located in a different directory, you must use this flag to specify the location of the evt.ini file.
-q	Run EVT in query mode. See "Running EVT in Query Mode" on page 269.
-w	Location of the Web server installation (required for SWSE related checks on UNIX).

NOTE: If you do not provide -e, -g, -s, -u, and -p options, EVT tries to query information from the configuration files under the ENU directory.

Example 1

Launching EVT using a custom .ini file and generating HTML output:

```
evt -f evt_cust.ini -o HTML > output.html
```

Example 2

Launching EVT using a custom .ini file and generating HTML output with details on what commands were run, what files were opened, and so on:

```
evt -f evt_cust.ini -o HTML -d SHOWCOMMENTS > output_debug.html
```

Available EVT Output Formats

EVT supports the following output formats:

■ **TEXT.** Prints all output directly to the console, terminal, or DOS window. This is the only mode of operation when EVT is executed in query mode by giving the -q option. For an explanation of flags that can be used with EVT, see "Optional EVT Command Line Flags" on page 271.

■ **TEXTFILE.** Prints all output to a log file. The filename format is evt.*hostname*.*timestamp*.log. The log is created in the current directory. To create the log in a specified directory, use the -l *log_dir* option, where *log_dir* is the path to the desired directory.

■ **HTML.** Prints HTML output to the console, terminal, or DOS window. This format is mainly for redirecting the output to another program or utility that can consume the output or redirect it to a file.

■ **HTMLFILE.** HTMLFILE output format creates an HTML file in the current directory. The file name takes the form evt.*hostname. timestamp.* htm.

where:

■ *hostname* = Machine name from where you are running EVT.

■ *timestamp* = Number of epoch seconds (starting from January 1, 1970). It exists solely to maintain the uniqueness of filenames.

You should delete previously generated output files on a regular basis.

A Deployment Planning Worksheet

Each time you install a new Siebel Enterprise Server, you must make copies of this worksheet for each member of the deployment team. This worksheet includes the following sections:

- "Team Lead Summary Data" on page 275
- "Enterprise Server Names and Installation Directories Data" on page 275
- "Siebel Accounts, Host Names, and Static IPs Data" on page 276
- "Cluster Deployment Data" on page 277
- "Ports and RDBMS Details Data" on page 278

Team Lead Summary Data

Section 1: Deployment Team Members

Deployment Team Lead	
Siebel Administrator	
System Administrator	
Database Administrator	

Section 2: Deployment Overview

Component Name	Version	Codepage /Unicode	Owner	Number of Users	Server OS
Database Server (RDBMS:)					
Siebel Servers					
Web Server					

Enterprise Server Names and Installation Directories Data

Make a copy for *each* Siebel Enterprise Server you install.

Also record the names of all applicable ODBC data sources for your Siebel Database. Data sources are created automatically by the Siebel Enterprise Server installer and by Siebel client installers. For more information, see "Planning RDBMS Installation and Configuration" on page 22.

Section 3: Server Names

Component Name	Network Host Name	Installation Directory
Siebel Enterprise Server / Siebel Root		
Siebel Gateway Name Server		
Siebel Server		
Siebel Database Server		
Siebel File System		
Web Server		

Siebel Accounts, Host Names, and Static IPs Data

Make a copy for *each* Enterprise you install.

Section 4: Siebel Account Information

	Login/User ID	Password
Siebel Service Owner		
Anonymous Employee User ID		
Contact User ID		
Security User ID (LDAP)		

Section 5: Host Name and Static IP Addresses

Server Name	Static IP/Host Name	Subnet Mask
Siebel Gateway Name Server		
Siebel Enterprise Server (load balancer virtual IP, if third-party load balancer is used)		
Siebel Server		

Cluster Deployment Data

Make a copy for *each* partition of your shared disk. (Choice of resource groups clustered is optional.)

Section 6: Cluster Resource Groups

Resource Group	Network Name	IP Address/Machine Name
Siebel Gateway Name Server		
Siebel File System		
Siebel Database		

Section 7: Cluster Configuration

Server Type	Network Hostname	Cluster IP Address	Resource Group IP Address	Subnet
Siebel Gateway Name Server Node 1				
Siebel Gateway Name Server Node 2				
Siebel File System Node 1				
Siebel File System Node 2				

Cluster Group	Heartbeat IP Address	Heartbeat Subnet

Ports and RDBMS Details Data

Section 8: Ports and ODBC Data Source Name

Make a copy for *each* Enterprise you install.

NOTE: If your database is IBM DB2 UDB for z/OS, a Deployment Planning Worksheet dedicated to the Siebel Database installation is provided in *Implementing Siebel Business Applications on DB2 UDB for z/OS*.

Synchronization Manager for Remote Users	
Request Manager (optional)	
Siebel Connection Broker	
ODBC Data Source Name	
Other Ports	

Section 9: Database Information

Items (if applicable)	Value
RDBMS OS Platform, Version and Patch	
RDBMS Platform, Version, and Patch	
Database Server	
Host Instance Name	
Database Name	
Port #	
Table Owner and Password	
Table Space Name, Usage (Data or Index), and Page Size	
Table Space Name, Usage (Data or Index), and Page Size	
Table Space Name, Usage (Data or Index), and Page Size	

Index

Symbols