



SIEBEL[®] 7
eBusiness

SIEBEL DATA WAREHOUSE INSTALLATION AND ADMINISTRATION GUIDE

VERSION 7.5.3, REV. A

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Introduction

This guide explains how to configure the Siebel Data Warehouse (the physical data warehouse database) and its related components. Before it can be installed, the Siebel Data Warehouse database must be created manually by a database administrator.

NOTE: This guide applies to the 7.5.3 release of Siebel Analytics and Siebel Data Warehouse, not to earlier releases.

It is strongly recommended that the installation of Siebel Data Warehouse be done through the Installer Wizard in the Siebel Analytics installation. Use this guide together with *Siebel Analytics Installation and Configuration Guide* during the Siebel Data Warehouse installation.

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

Who Should Use This Guide

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

Database Administrators	Persons who administer the database system, including data loading, system monitoring, backup and recovery, space allocation and sizing, and user account management.
Siebel Application Administrators	Persons responsible for planning, setting up, and maintaining Siebel applications.
Siebel Application Developers	Persons who plan, implement, and configure Siebel applications, possibly adding new functionality.
Siebel System Administrators	Persons responsible for the whole system, including installing, maintaining, and upgrading Siebel applications.

Product Modules and Options

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

How This Guide Is Organized

This guide is organized according to the sequence of events necessary to complete the installation for an enterprise.

- Siebel Data Warehouse is a multiple-component product. The first two chapters explain what software components (especially third-party components) need to be installed on which computers.
- [Chapter 3, “Setting System Preferences and Using Exception Reports,”](#) explains how to use the application System Preferences and Exception Reports views to make sure your Siebel Data Warehouse installation is configured correctly.
- [Chapter 4, “Administering and Troubleshooting the Siebel Data Warehouse,”](#) covers the ongoing tasks administrators need to perform, such as the process of importing data into a data warehouse, as well as some troubleshooting hints.
- [Appendix A, “The Siebel 6.3 to 7.5 Analytics Bridges,”](#) discusses the installation of the Siebel 6.3 to 7.5 Analytics Bridges. If you are using the Siebel eBusiness (Horizontal) 6.3. application, a Siebel eFinance 6.3 application, or a Siebel ePharma 6.3 application, and have also licensed version 7.5 of Siebel Analytics, you will need to install a Siebel 6.3 to 7.5 Analytics Bridge in order to use the newer functionality of Siebel Analytics 7.5 with your Siebel 6.3 transactional database data.

NOTE: You should review Appendix A before you begin the Siebel 6.3 to 7.5 Analytics Bridge installation process.

- [Appendix B, “The Siebel 7.0.4 to 7.5 Analytics Bridges,”](#) discusses the installation of the Siebel 7.0.4 to 7.5 Analytics Bridges. If you are using a Siebel eBusiness (Horizontal) version 7.0.4 application, and have also licensed version 7.5 of Siebel Analytics, you will need to install a Siebel 7.0.4 to 7.5 Analytics Bridge in order to use the newer functionality of Siebel Analytics 7.5 with your Siebel 7.0.4 transactional database data.

NOTE: You should review Appendix B before you begin the Siebel 7.0.4 to 7.5 Analytics Bridge installation process.

- If you are using IBM DB2 UDB running under OS/390, the repository and the star schema must be installed in separate databases. [Appendix C, “Installing and Configuring the Siebel Data Warehouse in DB2 for OS/390,”](#) provides the installation settings for installing the Siebel Data Warehouse in this case.

Third-Party Products and Documentation

Siebel Data Warehouse uses third-party data integration products from Informatica. The Informatica applications (Data Warehouse Server) extract, transform, and load legacy, relational, and Enterprise Resource Planning (ERP) data into the Siebel Data Warehouse. The load process builds a series of star schemas in the Siebel Data Warehouse.

NOTE: Installation requires specific versions of the third-party products, including Informatica PowerMart. Depending on the Informatica product you are licensed to use, install either Informatica PowerMart or PowerCenter. This guide refers to Informatica PowerMart, but all information applies as well to Informatica PowerCenter functionality. For applicable versions of third-party software, see *Siebel System Requirements and Supported Platforms*.

To complete your Siebel Data Warehouse planning, refer to the books listed in [Table 1](#). These books are provided on the CD-ROMs that came with this product. They will help you scale the installation of Informatica to fit your company's business needs. Documents supplied by Informatica are located on the Siebel Data Warehouse Server CD-ROM. These documents are available only in English.

Table 1. Third Party Documentation

Supplier	Title	Contents
Informatica	Administrator Guide	Covers the administration of the Informatica products.
	Installation and Configuration Guide	Covers installation and configuration of the Informatica tools, including details on environment variables and database connections.
	Workflow Administration Guide	Covers the creation and running of workflows and sessions, and the administration of the Informatica Server.
	Designer Guide	Covers data warehouse implementation of mappings, transformations, and metadata.
	Repository Guide	Covers the Informatica repository and the Repository Server Manager. The Repository stores metadata used by the Informatica Server and Client.
	Troubleshooting Guide	Covers troubleshooting issues.
	User Guide	Provides information on the use of PowerMart.

Revision History

Siebel Data Warehouse Installation and Administration Guide

Version 7.5.3, Rev. A

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

Topic	Revision
Appendix E, “Capturing Row Deletion Changes”	Added an appendix that explains how the Siebel Data Warehouse deletes rows.
“Upgrading the Data Warehouse Schema Using upgrep_dw” on page 82	Added this section for customers who want to upgrade the Siebel Data Warehouse 7.0.4 schema to the 7.5.3 schema using the upgrep_dw batch file.
Appendix A, “The Siebel 6.3 to 7.5 Analytics Bridges” and Appendix B, “The Siebel 7.0.4 to 7.5 Analytics Bridges”	Added a note to the installation process, explaining what a customer should do if they have already installed Siebel Analytics 7.5 and created the Informatica repository.
“Optional Customization Procedures” on page 111	Added a reference to review Technical Note 420 located on SupportWeb for information about customizing the Siebel Data Warehouse.
“Linking Workflows” on page 114	Added a section in the Linking Example, to show how a customer can use the command PMCMD startworkflow to execute a workflow.
“IBM DB2 UDB-Specific Database Requirements” on page 32	Added the Sortheap and Sheapthres variables, and recommended settings for IBM DB2 UDB databases.
“Oracle-Specific Database Requirements” on page 34	Added the Sort_area_retained_size and Sort_area_size variables, and recommended settings for Oracle databases.
“Creating Database Connections” on page 63	Added a note that an Oracle 8 ODBC driver should be used for an Oracle 9i Siebel Data Warehouse.

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

Topic	Revision
“Informatica and Loading Issues” on page 131	<ul style="list-style-type: none">■ Added a section that details a non-fatal error when running the Siebel_DW_Rep jobs through the pmcmd.■ Added a section that details an error that may occur when executing SDE_ETLDataSource.

Version 7.5.3

Table 3. Changes Made in Version 7.5.3

Topic	Revision
Introduction on page 9	<ul style="list-style-type: none">■ Added a note to the Introduction stating that this guide assumes that you are using the 7.5.3 release.■ Added a note that the Siebel Data Warehouse is also referred to as the Siebel Relationship Management Warehouse.
Product Modules and Options	Added text regarding functionality and licensed modules.
“Deploying Informatica and Siebel Data Warehouse in Non-English Environments” on page 27	New for 7.5.3: Added this section to clarify settings required to deploy the Siebel Data Warehouse and Informatica 6.1 in languages other than English.
“Installing the Siebel Data Warehouse” on page 53	<ul style="list-style-type: none">■ Revised for 7.5.3: Revised information according to changes made in the installation program.■ New for 7.5.3: Added a note to the Installer procedure regarding a new choice to install the Analytics Bridges, with cross-reference to Appendixes A and B, where the Analytics Bridge installations are described.

Table 3. Changes Made in Version 7.5.3

Topic	Revision
“Recommended Configuration” on page 23	Revised for 7.5.3: Updated the hardware configuration graphic to show the new three-tier server structure of Siebel Data Warehouse due to Informatica 6.1.
“General Process Flow for Installing Siebel Data Warehouse” on page 44	Revised for 7.5.3: Added a flow diagram of the installation process.
“Installing Informatica Software” on page 48	Revised for 7.5.3: Changed procedures for the installation of Informatica 6.1 version used by Siebel Analytics 7.5.3.
“Upgrading the Informatica Platform” on page 81	New for 7.5.3: Added this section for customers who have a version of Siebel Data Warehouse that uses Informatica 5.x.
Appendix A, “The Siebel 6.3 to 7.5 Analytics Bridges”	Revised for 7.5.3: Revised this appendix to cover all 6.3 to 7.5 Bridges. The Bridge must be installed manually; it is not installed by the installer program.
Appendix B, “The Siebel 7.0.4 to 7.5 Analytics Bridges”	New for 7.5.3: Added appendix for installation of the Siebel eBusiness 7.0.4 to 7.5 Analytics Bridge. The Bridge must be installed manually; it is not installed by the installer program.
“Troubleshooting the ETL Process” on page 105	Added a reference to review Siebel Technical Note 406, located on SupportWeb.
Appendix A, “The Siebel 6.3 to 7.5 Analytics Bridges”	Added a reference to review Siebel Technical Note 429, located on SupportWeb.
Appendix B, “The Siebel 7.0.4 to 7.5 Analytics Bridges”	Added a reference to review Siebel Technical Note 429, located on SupportWeb.
Appendix D, “Applying SIF Patches”	Added instructions for applying the .sif file patches when upgrading from versions of Siebel Data Warehouse prior to 7.5.2.101.

Additional Changes

- Corrected or added settings for code pages in non-English deployments.

- Changed the term batch (as used for ETL) to workflow.
- Removed most uses of the term OLAP, and replaced it with more specific terms based on context.

Version 7.5, Rev. C

Table 4. Changes Made in Version 7.5 Rev. C

Topic	Revision
7.5.2.210/.211 Maintenance Release requirement	Added a note to the Introduction stating that this guide assumes that you are using the 7.5.2.210 or 7.5.2.211 maintenance release.
Appendix A, Siebel ePharma 6.3 to 7.5 Analytics Bridge	Added a note to Installer procedure regarding a new choice to install the Analytics Bridge, with cross-reference to Appendix B, where the Analytics Bridge is described.
	Added a note to Installer procedure that if an Analytics Bridge will be installed, to read the appendix before beginning.
Importing Data with Siebel EIM	This section, of interest only to those customers using the Siebel Life Sciences Data Warehouse, has been moved to <i>Siebel Life Sciences Guide</i> .

Version 7.5, Rev. B

Table 5. Changes Made in Version 7.5 Rev. B

Topic	Revision
7.5.2.200 Maintenance Release requirement	Added a note to the Introduction stating that this guide assumes that you are using the 7.5.2.200 maintenance release.
Appendix A, Siebel ePharma 6.3 to 7.5 Analytics Bridge	Added Appendix on installation of Siebel ePharma Data Warehouse 6.3 to 7.5 Analytics Bridge.
	Added note to Installer procedure regarding a new choice to install the Analytics Bridge, with cross-reference to Appendix A, where the Analytics Bridge is described.

Table 5. Changes Made in Version 7.5 Rev. B

Topic	Revision
Appendix C, “Installing and Configuring the Siebel Data Warehouse in DB2 for OS/390”	The Siebel Analytics installer does not work for installation of the data warehouse for DB2 for OS/390. Appendix C provides instructions on using the previous SES installer to install the data warehouse.
In the Chapter 4, “Administering and Troubleshooting the Siebel Data Warehouse,” restoration of “Analytics Data Loading Matrix for Syndicated Data” and “Siebel Analytics for Life Sciences” sections of book	The material in the “Analytics Data Loading Matrix for Syndicated Data,” “Siebel Analytics for Life Sciences,” and EIM loading sections is about loading data from the OLTP into the Siebel Data Warehouse. It was removed from the previous version of the book but has been restored.

Version 7.5.2.101

Table 6. Changes for Version 7.5.2.101

Topic	Revision
“Installing the Siebel Data Warehouse” on page 52	Added notes in the Introduction and “Installing and Configuring the Siebel Data Warehouse” chapter, to specify that the Siebel Data Warehouse must be installed through the Siebel Analytics installation.
	Installation section rewritten to reflect new installation program.
Deleted “Analytics Data Loading Matrix for Syndicated Data” and “Siebel Analytics for Life Sciences” sections from the “Administering and Troubleshooting the Siebel Data Warehouse” chapter	This material is not about the data warehouse, but rather about loading data into the OLTP. These sections are to be moved to more appropriate books.
“Third Party Documentation”	The third-party products and documentation sections, previously widely separated, were reorganized and combined into one table.

Version 7.5.2 Rev. A**Table 7. Changes for Version 7.5.2 Rev. A**

Topic	Revision
General platform-specific information	Most information about supported platforms was removed to <i>Siebel System Requirements and Supported Platforms</i> . However, where platform variations influence the configuration process, this information was retained, clarified, or added (see below).
Informatica Client requirements	In “Installing Informatica PowerMart Client” on page 36, added warning notes about configuring specific operating system platforms with a specific DBMS.
Oracle DBMS requirements	Added tablespace and binary sorting requirements to “Oracle-Specific Database Requirements” on page 29.
SQL Server requirements	Added “To modify the DB Library Options setting” on page 31.
UNIX installation requirements	Added note to “Configuring the Repository Server” on page 62 that this installation must be from a CD-ROM.
Added installation step	Added “To check the log file” on page 51.
System variable changes	Rewrote “Changing the System Variables” on page 52 as a procedure, and added NLS_LANG information. Added HP-UX, Solaris, and AIX settings to “Setting the Environment Variables for Informatica Server Under UNIX” on page 63.
Data Code Pages	Added “Data Code Pages Validation” on page 51 to resolve operating system conflicts with languages. Added note that Code Page 1252 must run on the Informatica Server (Siebel Data Warehouse Server) to “Configuring the Informatica Service” on page 39.

Overview of Siebel Data Warehouse

1

The Siebel Data Warehouse is a unified data repository for all customer, sales, service, product, marketing, employee, and partner data.

The Siebel Data Warehouse includes:

- A data integration engine that combines data from the Siebel transactional database and other data sources to build a data warehouse.
- An open architecture to allow organizations to use third-party analytical tools in conjunction with the Siebel Data Warehouse using the Siebel Analytics Server.
- Optional prebuilt data extractors to incorporate data from external applications into the Siebel Data Warehouse.
- An ETL (extract-transform-load) process bridge between a Siebel 6.3 eBusiness application transactional data and the 7.5 Siebel Data Warehouse tables.
- An ETL (extract-transform-load) process bridge between a Siebel 7.0.4 eBusiness application transactional data and the 7.5 Siebel Data Warehouse tables.

Data Flow into the Data Warehouse

High-level analytical queries, like those commonly used in Siebel Analytics, scan and analyze large volumes of data using complex formulas. This process can take a long time when querying a transactional (OLTP) database, which impacts overall system performance.

For this reason, the Siebel Data Warehouse is an *online analytical processing* (OLAP) database, which allows you to selectively extract, analyze, and view data. To facilitate this kind of analysis, analytical data is stored in a relational database that considers each data attribute (such as product, account, and time period) as a separate dimension.

The Siebel Data Warehouse is designed using dimensional modeling techniques to support the analysis requirements of Siebel Analytics. The data warehouse derives its data from Siebel operational applications, and includes a prebuilt Informatica repository plus all the scripts necessary to create tables and relationships within the data warehouse. Several prebuilt mappings within the Informatica repository allow the initial loading and periodic refreshing of the Siebel Data Warehouse.

Figure 1 illustrates the data flow into the Siebel Data Warehouse.

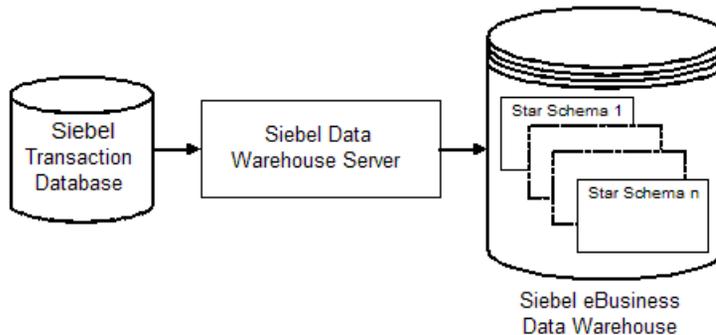


Figure 1. Data Flow From OLTP to OLAP

Server and Client Hardware Configuration

The Siebel Data Warehouse product requires that you install server component software on your server computers.

NOTE: Installation on a Windows 2000 Primary Domain Controller or Backup Domain Controller is not supported. See *Siebel Global Deployment Guide* for more details.

Figure 2 shows the recommended configuration for the server components.

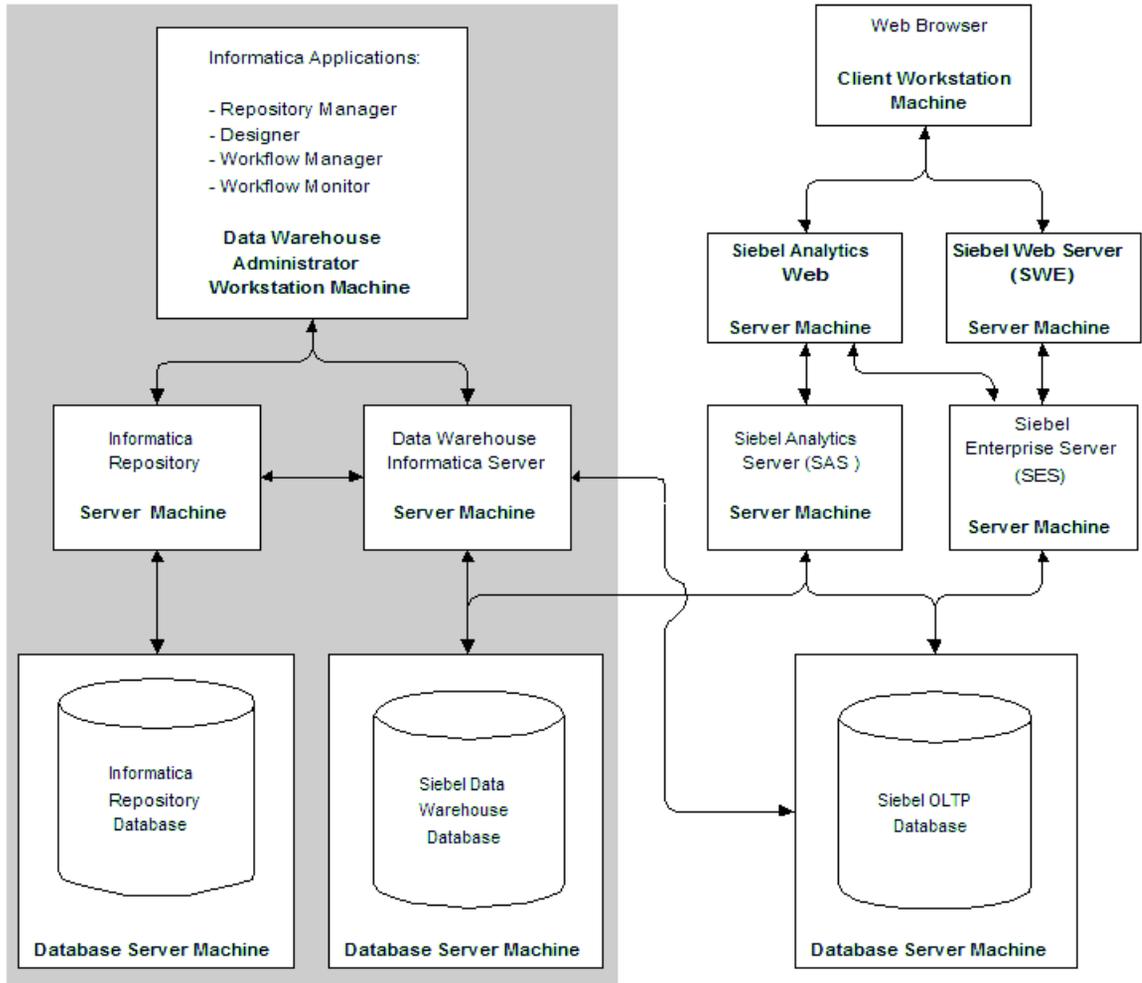


Figure 2. Recommended Configuration

This document refers to these computers by the designated computer names in [Table 8](#).

Table 8. Computer Names and Their Server Components

Computer	Server Components
Siebel Server	Siebel Server Siebel Web Engine
Web Server	Web Server software Siebel Web Server Extension
Data Warehouse Server	Informatica Server Informatica Repository Server NOTE: Although the Informatica Server and Repository Server may be run on the same machine, this is not recommended for performance reasons.
Administrator Workstation	Informatica Client

Planning the Installation

Before installing the Siebel Data Warehouse, you should plan the installation using the information provided in this document and in documents from third-party suppliers.

NOTE: Before it can be installed, the Siebel Data Warehouse database must be created manually by a database administrator.

The Siebel Data Warehouse Administrator Workstation

The Administrator Workstation holds the client software for Informatica (PowerMart). The Administrator Workstation can be an existing workstation for the person who takes on the designer role. You do not need to obtain a computer solely dedicated to being an Administrator Workstation. A dedicated computer is preferred, but not required. Although your installation needs only one Administrator Workstation, you can have multiple Administrator Workstations.

For easy access, make sure that the Administrator Workstation is located in a private or public workspace away from the secure server room.

The Data Warehouse Server

The Data Warehouse Server consists of the Informatica Server and Informatica Repository Server.

The Data Warehouse Server initially loads the Siebel Data Warehouse and performs subsequent incremental loads. Depending upon your business needs, you might incrementally refresh the Siebel Data Warehouse once a day, once a week, once a month, or other similar scheduling. When the computer is loading or refreshing the Siebel Data Warehouse, it is recommended that the server be dedicated to that activity. However, when the Data Warehouse Server is not loading or refreshing the Siebel Data Warehouse, you can use it for other purposes. Companies that increment daily may prefer that the Data Warehouse Server be dedicated to that purpose. Companies that increment monthly may prefer that the server be shared with other applications and server software.

The Siebel Server

Your company may have one or multiple Siebel Servers. The Siebel Data Warehouse installation does not access files on the Siebel Server.

The Web Server

The Web Server is the point of contact for the client workstations. It takes the client requests and passes them to the Siebel Server. Your company may have one or multiple Web Servers.

Creating Multiple Instances of Siebel Data Warehouse

You can create multiple instances of Siebel Data Warehouse. Typically you do this to create a development environment where you can test customizations and other modifications without inconveniencing the production users. The procedures for creating a new instance are beyond the scope of this document. Please contact Expert Services for assistance with the planning and implementation.

Requirements for Server Components

To install the server components, the computers need to meet the conditions specified in *Siebel System Requirements and Supported Platforms*.

Additional Data Warehouse Server Requirements for Windows 2000

If the Data Warehouse Server runs under Windows 2000, the following requirements must be in place to use the post-session email feature of Informatica. This feature sends a confirmation email when the Siebel Data Warehouse is populated with new data.

- A Microsoft Outlook mail client must be configured on the Data Warehouse Server. This works with most versions of Outlook except Outlook 2000. For more information see [“Informatica and Loading Issues” on page 131](#).
- Microsoft Outlook must be running on the Microsoft Exchange server.
- The account that sends post-session emails must have rights to start the Informatica service.
- The account must have a Microsoft Outlook account.

For more information, see Informatica’s user guide.

Installing Informatica Documentation

In order to install the Informatica help, readme file, and documentation files, the workstation’s regional settings must be set to English prior to installing Informatica PowerMart. After installation you can restore this setting to its original value. The help, readme, and documentation files are only available in English.

To change the regional settings

- 1 Click Start > Settings > Control Panel > Regional Settings.
- 2 Choose English.
- 3 Select the Set as system default locale box.

- 4 To make the change effective, reboot the computer.

NOTE: Depending on the Informatica product you are licensed to use, install either Informatica PowerMart or PowerCenter. This guide refers to Informatica PowerMart, but all information applies as well to Informatica PowerCenter functionality. For applicable versions of third-party software, see *Siebel System Requirements and Supported Platforms*.

Deploying Informatica and Siebel Data Warehouse in Non-English Environments

This section describes the different settings for Informatica servers and databases when deploying the Siebel Data Warehouse in non-English environments. When you configure Informatica, the data warehouse repository, and the databases, you will need to refer to this section.

The Siebel Data Warehouse can be deployed in various code page environments to support global deployments. The following (source and target) configurations are supported:

- Code page (multi- or single-byte) to Unicode
- Unicode to Unicode
- Code page to code page (where the code pages are the same)

The Informatica Server must always be installed on an operating system which uses the 1252 code page. There is only one case where the Informatica Server and Informatica repository server need to be installed on different operating system locales:

- The source database is a single code page (for example, 1252) or multibyte code page (for example, JA16SJIS), and
- The target is a Unicode database (for example, AL32UTF8)

Configuring Code Page to Unicode Environments

For installation on multibyte code page environments, the data warehouse setup requires two operating system environments: one on an English code page-based operating system and one on the multibyte language-based operating system. Examples of multibyte operating systems are Japanese (JPN) or Korean (KOR).

During “[To install the Siebel Data Warehouse using the Siebel Data Warehouse installer](#)” on page 54, when filling out the Setup Type page, the Installer screen option “Create Siebel Data Warehouse tables” must be run from the multibyte operating system. However, all the other installation steps must be run from the English-language operating system.

[Table 9 on page 28](#) shows the DBMS settings for an environment with a Japanese source database and a Unicode target Siebel Data Warehouse.

Table 9. Japanese Code Page to Unicode Settings

Parameters	Oracle	IBM DB2 UDB
Source DB code page	JA16SJIS	943
Source DB connection	In Workflow Manager > Connections > Relational, set to MS Windows Japanese	In Workflow Manager > Connections > Relational, set to Shift_JIS
Operating system Locale for Informatica Server	English–American operating system with environment variable NLS_LANG = AMERICAN_AMERICA.JA16SJIS	English-American operating system
Informatica Server code page	Windows Latin 1	Windows Latin 1
Informatica Server (Unicode settings)	SIEBELUNICODEDB not set. Data movement mode set to Unicode	SIEBELUNICODEDB not set. Data movement mode set to Unicode
Target DB connection code page	In Workflow Manager > Connections > Relational), set to MS Windows Japanese	In Workflow Manager > Connections > Relational, set to Shift_JIS
Target DB code page	AL32UTF8 (Unicode)	1208 (Unicode)

Table 9. Japanese Code Page to Unicode Settings

Parameters	Oracle	IBM DB2 UDB
Informatica Repository Server code page	AL32UTF8 (Unicode)	MS Windows Latin 1 (ANSI)
Operating system Locale for Informatica Repository Server	ENU with NLS_LANG = AMERICAN_AMERICA.AL32UTF8	ENU with DB2CODE PAGE set to 1208
Code page of Informatica Repository	Code page of the Informatica repository database.	1208 (Unicode)

Table 10 on page 29 shows the DBMS settings for an environment with a German source database and a Unicode target Siebel Data Warehouse.

Table 10. Single-Byte Code Page to Unicode Settings

Parameters	Oracle	IBM DB2 UDB
Source DB code page	WE8ISO8859P1	1252
Source DB connection	In Workflow Manager > Connections > Relational, set to MS Windows Latin 1	In Workflow Manager > Connections > Relational, set to MS Windows Latin 1
Operating system Locale for Informatica Server	English –American	English-American operating system
Informatica Server code page	Windows Latin 1	Windows Latin 1
Informatica Server (Unicode settings)	SIEBELUNICODEDB not set; data movement mode set to Unicode	SIEBELUNICODEDB not set. Data movement mode set to Unicode
Target DB connection code page	In Workflow Manager > Connections > Relational, set to MS Windows Latin 1	In Workflow Manager > Connections > Relational, set to MS Windows Latin 1
Target DB code page	AL32UTF8 (Unicode)	1208 (Unicode)
Informatica Repository Server code page	MS Windows Latin 1 (ANSI)	MS Windows Latin 1 (ANSI)

Table 10. Single-Byte Code Page to Unicode Settings

Parameters	Oracle	IBM DB2 UDB
Operating system Locale for Informatica Repository Server	ENU with NLS_LANG = AMERICAN_AMERICA.AL3 2UTF8	ENU with DB2CODEPAGE set to 1208
Code page of Informatica Repository	Code page of the Informatica repository database	1208 (Unicode)

Configuring Unicode to Unicode Environments

Unicode requires the code page configuration, described in this section.

NOTE: Run Informatica Server in Unicode mode when the source data supports multibyte or ISO 8859-1 (8 bit ASCII) code pages, or when the source and target database is Unicode. If you are not using a Unicode database, select the ASCII option.

To configure Unicode for Windows

- 1 Navigate to HKEY_LOCAL_MACHINE > SYSTEM > CurrentControlSet > Services > PowerMart > Parameters > Configuration.
- 2 On the right window panel, right-click and select New > String Value.
- 3 Rename the new string value SiebelUnicodeDB.
- 4 Double-click SiebelUnicodeDB.
- 5 In the Value data: field, enter your [user_OLTP]@[connectString_OLTP]
[user_OLAP]@[ConnectString_OLAP].

For example, siebel@db204007 siebel@db204008.
 - For Oracle and DB2, leave a space between siebel@db204007 and siebel@db204008.
 - For MSSQL, use system DNS name for [connectString_OLTP] and [connectString_OLAP].

- 6** Navigate to Control Panel > System and click Advanced tab. Click Environment Variables.
- 7** In System variables section, click New.
- 8** Create the system variable name.
 - For Oracle databases:
 - In the data warehouse database, run the command

```
SELECT * FROM V$NLS_PARAMETERS
```
 - Mark the NLS_LANG
[NLS_LANGUAGE]_[NLS_TERRITORY].[NLS_CHARACTERSET].
For example:

```
American_America.UTF8
```
 - In the Variable Value field, enter American_America.UTF8.
 - For DB2 databases:
 - In Variable Name field, enter DB2CODEPAGE.
 - In Variable Value field, enter 1208.
- 9** Click OK to close.
- 10** Reboot the machine after creating the variables.

Siebel Data Warehouse Database Requirements

The Siebel Data Warehouse is a database that contains the star schemas created by Informatica.

Although it is technically possible to put the Siebel Data Warehouse in the same database as the Siebel transactional database, it is not recommended for performance reasons. The Siebel transactional database is structured as an online transaction processing (OLTP) database, whereas the Siebel Data Warehouse is structured as an online analytical processing database. Each is optimized for its own purpose. The reasons for not combining the two databases are:

- The analytical queries interfere with normal use of the transactional database, which is entering and managing individual transactions.
- The data in a transactional database is normalized for update efficiency. Analytical queries join several normalized queries and will be slow (as opposed to prejoined, denormalized analytical tables).
- Historical data cannot be purged from a transactional database, even if not required for current transaction processing, because you need it for analysis. (By contrast, the analytical database is the warehouse for historical as well as current data.) This causes the transactional database to further slow down.
- Transactional databases are tuned for one specific application, and it is not productive to use these separate transactional databases for analytical queries that usually span more than one functional application.
- The analytical database can be specifically tuned for the analytical queries and Extract-Transform-Load (ETL) processing. These are quite different from transactional database requirements.
- The Siebel Data Warehouse repository stores all of the Informatica object definitions for the ETL mappings that populate the Siebel Data Warehouse. It is a series of repository tables that are stored in a database, which can be the transactional, analytical, or a separate database.

The Siebel Data Warehouse works with database management systems (DBMS). In addition to the general requirements, there are additional DBMS-specific requirements depending on the DBMS you are using.

IBM DB2 UDB-Specific Database Requirements

The following requirements apply to DB2 RDBMS usage:

- IBM DB2 UDB for Windows 2000.
- ODBC driver for all connections must use the IBM DB2 ODBC Driver.
- Make the appropriate connections using DB2 Client Configuration Assistant.
- Create the user accounts that access the database. They must have SSE_ROLE and be set so that the .dll commands can be run (permissions to create tables).

- One login user needs to be created in an empty database. The database objects will be created using this user login.
- Recommended baseline parameters. [Table 11 on page 33](#) contains the recommended settings for these variables.

Table 11. Recommended Variable Settings for IBM DB2 UDB Databases

Parameter	Recommended Setting	Notes
Datafile Size (including System)	At least 50% of Siebel transactional database size	Database managed
Isolation Level	cursor stability	
Locklist	5000	
Maxlock	50	
Applheapsz	2560	
Logfilsiz	8000	
Logprimary	120	
Logsecond	2	
Tablespaces	16K or 32K page size	Database managed
Sortheap	4000	Sort list heap
Sheapthres	400000	Sort heap threshold

- In your Siebel transactional database, move the following tables to a tablespace separate from all other tables in the database:
 - S_ETL_COSTLST
 - S_ETL_CURR_RUN
 - S_ETL_ERRHLP
 - S_ETL_ERRLOG
 - S_ETL_EXCH_RATE

- S_ETL_INC_STAT
- S_ETL_I_IMAGE
- S_ETL_LOV
- S_ETL_PARAM
- S_ETL_RUN
- S_ETL_VI_IMAGE

These tables are used by the Siebel Data Warehouse and should not be part of the routine backup processes.

For more information, see IBM's DB2 database configuration guide.

Oracle-Specific Database Requirements

The following requirements apply to Oracle RDBMS usage:

- Make the appropriate connections using Oracle Net8 Assistant (for Oracle 8 databases) or Oracle Net Service (for Oracle 9 databases).
- Create the user accounts that access the database. They must have SSE_ROLE and be set so that the .dll commands can be run (permissions to create tables).
- Set the tablespace for the Siebel Data Warehouse. Recommended values are shown in the following table.
- Create a login user with the tablespace as the default tablespace. The database objects will be created using this user login.

- Edit the Init.ora file. Use the recommended baseline parameters shown in [Table 12 on page 35](#).

Table 12. Recommended Variable Settings for Oracle Databases

Parameter	Recommended Setting	Notes
Always_anti_join	HASH	Not available in Oracle 9i or later.
Cursor_space_for_time	TRUE	Use only if you do not have many concurrent connections.
Db_block_lru_latches	Set to number of CPUs	
Db_block_size	32k	
Db_file_direct_io_count	64	Not available in Oracle 9i or later.
Db_file_multiblock_read_count	STMAXIO / DB_BLOCK_SIZE	
Db_file_multiblock_read_count	32	
Default Pctincrease	0	
Hash_area_size	20 MB	
Hash_multiblock_io_count	0.5 * (db_file_multiblock_Read_count)	Make sure that you are <i>not</i> using MTS.
Initial Extent	20 MB	
Log_buffer	2 MB	
Next Extent	20 MB	
Optimizer_index_caching	Unset	Unset this to avoid nested loops index joins (as favored by the optimizer).
Optimizer_index_cost_adj	Set to default	See NOTE following these parameters.

Table 12. Recommended Variable Settings for Oracle Databases

Parameter	Recommended Setting	Notes
Optimizer_max_permutations	default of 80,000	May be applicable to other schemas in the database. This means longer parsing times for the access paths, but once these are parsed, they should remain in the shared_pool, provided they do not get aged out. See notes for Cursor_space_for_time.
Optimizer_mode	ALL_ROWS	Cost-based for Refresh ETL Rule- based for Full ETL.
Query_rewrite_integrity	USE_STALE	
Rollback_segments	For a development instance, no more than 2	Each rollback_segment sized as follows: <ul style="list-style-type: none"> ■ Initially 10 MB ■ Next 10 MB ■ Minextents 10 MB ■ Maxextents unlimited ■ Optimal 1000 MB
Shared_pool_size	34 MB	
Sort_area_retained_size	10 MB	
Sort_area_size	10 MB	
Sort_multiblock_read_count	4	Not available in Oracle 9i or later.
Star_transformation_enabled	TRUE	
Tablespace	At least 50% of Siebel transactional database size	Make sure the temporary tablespace has adequate space.

Table 12. Recommended Variable Settings for Oracle Databases

Parameter	Recommended Setting	Notes
Number of log file groups	4	
Size of each Log file	10MB	

Notes on OPTIMIZER_MODE Settings for Oracle

Take note of these OPTIMIZER_MODE settings:

- For OPTIMIZER_MODE settings, see [“Full Load Optimizer Settings in Oracle” on page 98](#) for full load and [“Incremental Load Optimizer Settings in Oracle” on page 108](#) for incremental refresh.
- For a full load, the optimizer should be set to Rule based in the in the init.ora parameters, thus: OPTIMIZER_MODE RULE.
- For an incremental load, the optimizer should be switched to Cost based in the in the init.ora parameters, after analyzing all the data warehouse (W_*) tables, thus: OPTIMIZER_MODE ALL_ROWS.

Additional Suggestions for Optimizing Oracle Performance

- Siebel eBusiness Applications under Oracle support only binary sorting. If you are running an Oracle client, do one of the following:
 - Set the NLS_SORT parameter to BINARY.
 - Choose a NLS_LANG setting that includes binary.

These settings are required for adequate performance from the Dedicated Web Client.

- Make sure that cost-based optimization is enabled in the Oracle development, test, and production databases and that statistics are kept up to date. Otherwise, the rule-based optimizer may be used.
- Create foreign keys in the Oracle database, but configure Oracle to not enforce the foreign key relationship. The existence of foreign keys will allow Oracle to better optimize certain queries. By turning off enforcement, the database load should not be negatively affected.

- In addition, you may also configure the Oracle star-join transformation. This requires non-enforced foreign keys in Oracle and the creation of necessary bitmap indexes. This task is optional. It may not be necessary, as ongoing tuning may reach the desired performance goals.
- Analyze application for occurrences of highly skewed data that is indexed. Create histogram statistics for these indexes to enable the optimizer to better
- To increase data throughput between Siebel Analytics Server and Oracle, change SDU and TDU settings in listener.ora. The default is 2 KB and can be increased to 8 KB.
- On the server side, edit the listener.ora file. Under the particular SID_LIST entry, modify SID_DESC as follows:

```
SID_LIST_LISTENER =  
    SID_LIST =  
        SID_DESC = (SDU=8192)(TDU=8192)  
        ORACLE_HOME = /.....)  
        SID_NAME = SOLAP)  
    )  
)
```

- On the client side, edit the tnsnames.ora file. Modify the TNS alias by adding SDU= and TDU= as follows:

```
myhost_orcl.world=  
    DESCRIPTION=(SDU=8192)(TDU=8192)  
    ADDRESS = (PROTOCOL = TCP)(HOST=myhost)(PORT=1521))  
CONNECT_DATA=(SID=ORCL)  
)
```

SQL Server-Specific Database Requirements

This section lists requirements for SQL Server database usage.

NOTE: SQL Server users must make sure the SQL Server client software is installed.

SQL Server Databases should be created with ANSI NULL option selected.

To set the ANSI NULL option

- 1 In Enterprise Manager, select Database.
- 2 Right-click and choose Database properties.
- 3 Click the Options tab and select the box for ANSI NULL default.

In a SQL Server 2000 environment, when loading Analytics tables with international data, or loading more than one language, modify the DB Library Options setting.

To modify the DB Library Options setting

- 1 In the program menu Microsoft SQL Server, launch the Client Network utilities.
- 2 Select the DB Library Options tab.
- 3 Clear the option Automatic ANSI to OEM.

NOTE: SQL Server 2000 automatically tunes many of the server configuration options, therefore an administrator is required to do little, if any, tuning. Although these configuration options can be modified, the general recommendation is that these options be left at their default values, allowing SQL Server to automatically tune itself based on run-time conditions.

To create the user accounts that access the database

- 1 Assign these user accounts SSE_ROLE.
- 2 Set these accounts to run the .dll commands (that is, set permissions to create tables).

Recommended SQL Server Database Parameters

If necessary, SQL Server components can be configured to optimize performance, as shown in [Table 13 on page 40](#).

Table 13. Recommended Variable Settings for SQL Server Databases

Parameter	Recommended Setting	Notes
Affinity mask	0	
Allow updates	0	
Awe enabled	0	
C2 audit mode	0	
Cost threshold for parallelism	5	
Cursor threshold	-1	
Default full-text language	1033	
Default language	0	
Fill factor	95%	For insert-intensive transactions, set Fill Factor between 90 and 95%. For better query performance, set Fill factor to 95 or even 100%.
Index create memory	1024 KB	Default is 0
Lightweight pooling	0	
Locks	0	

Table 13. Recommended Variable Settings for SQL Server Databases

Parameter	Recommended Setting	Notes
Max degree of parallelism	0	Default is 0. This turns off parallelism. Max degree of parallelism should be left at 0, which means use parallel plan generation. It should be set to 1 (use only 1 process) if you run multithreaded components (for example, several EIM threads).
Max server memory	2000 MB	Default is 2147483647
Max text repl size	65536 B	
Max worker threads	100	Default is 255
media retention	0	
Min memory per query	1024 KB	
Min server memory	500 MB	Default is 0
Nested triggers	1	
Network packet size	8192 B	Default is 4096
Open objects	0	
Priority boost	0	
Query governor cost limit	0	Modify to 60 only if CPU is high
Query wait	-1 sec	
Recovery interval	0 min	
Remote access	1	
Remote login timeout	20 sec	
Remote proc trans	0	

Table 13. Recommended Variable Settings for SQL Server Databases

Parameter	Recommended Setting	Notes
Remote query timeout	600 sec	
Scan for startup procs	0	
Set working set size	0	
Two-digit year cutoff	2049	
User connections	0	
User options	0	

- **SQL Server memory:** Make sure adequate memory is available.
- **Transaction logs and TempDB:** Reside on a separate disk from those used by database data.
- **Full load:** Full Recovery model for the database.
- **Incremental (Refresh) load:** Change from Full to Bulk-Logged Recovery model.

Overview of the Configuration Chapters

The installation chapters have been organized according to the computer on which the software will be installed.

- [Chapter 2, “Installing and Configuring the Siebel Data Warehouse”](#)

Refer to the process flow in [Figure 3 on page 44](#).

- [Chapter 3, “Setting System Preferences and Using Exception Reports”](#)

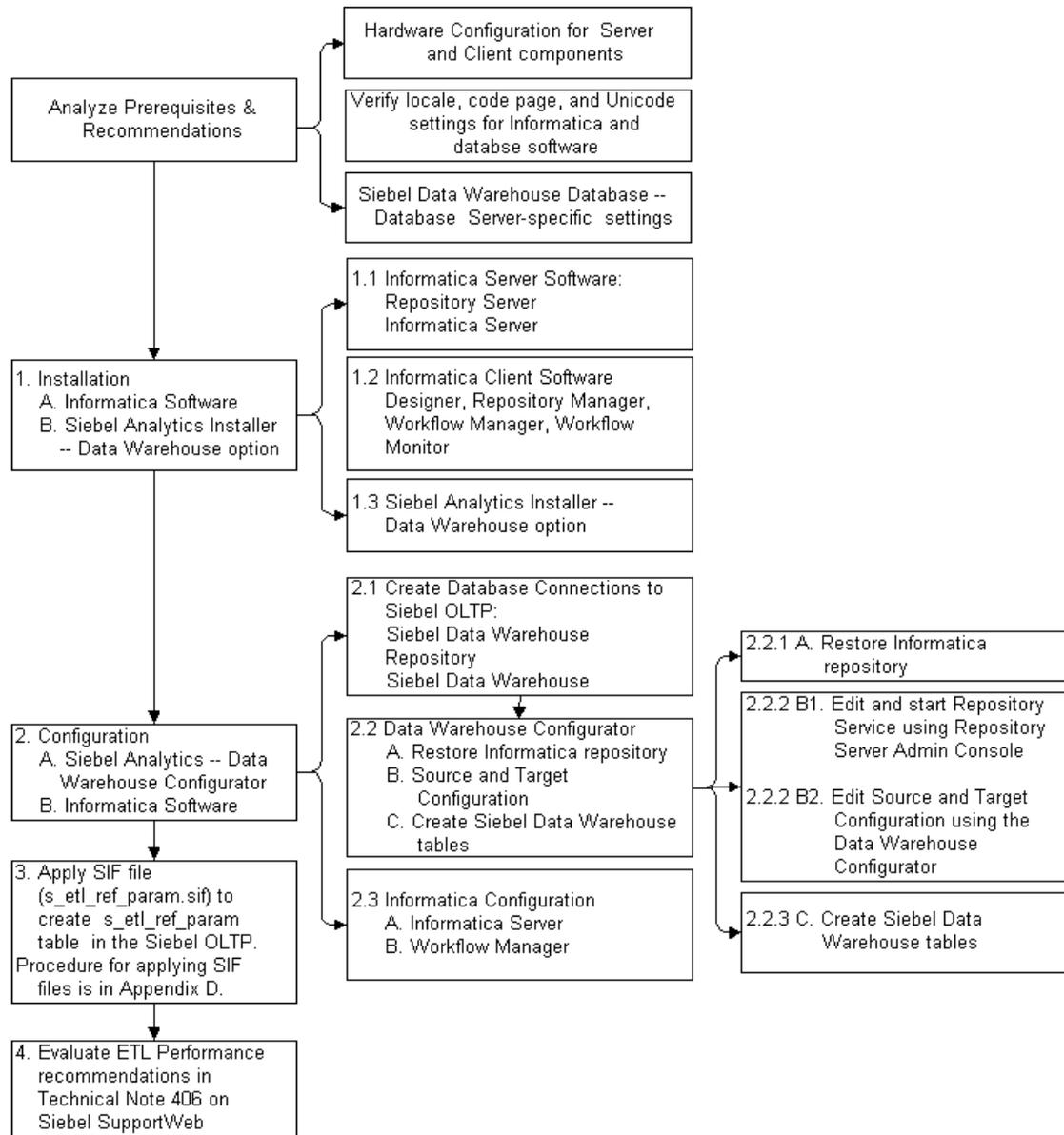


Figure 3. General Process Flow for Installing Siebel Data Warehouse

When installing, use the materials listed in [Table 14](#).

Table 14. Materials Provided

Item Name	Contains
Siebel 7 eBusiness Applications Bookshelf	Acrobat (PDF) versions of all documentation, including third-party documentation
Siebel Analytics CD-ROMs	CD-ROMs for Siebel Analytics installer and files
	Informatica PowerMart
	ETL Bridge CD-ROM (Siebel Analytics Applications customers only)
Informatica License Key Letter	License keys for Informatica components

Overview of Siebel Data Warehouse

Overview of the Configuration Chapters

This chapter describes the processes involved in installing the various clients and servers used for the Siebel Data Warehouse.

Siebel Data Warehouse Installation Overview

In general, the Data Warehouse Server and Administrator Workstation installation process follows this sequence:

- Install Informatica Server software
 - Repository Server
 - Informatica Server
 - Change Informatica database .dll files
- Install Informatica Client software
- Run the Siebel Data Warehouse installer (Data Warehouse option)
- Create database connections (Siebel OLTP):
 - Siebel Data Warehouse repository
 - Siebel Data Warehouse
- Run Siebel Analytics Siebel Data Warehouse Configurator
 - Restore Informatica repository
 - Configure Source and Target tables
 - Edit and start Repository Service (using Repository Server Administration Console)

- Edit Source and Target configuration using the Siebel Data Warehouse Configurator
- Create Siebel Data Warehouse tables
- Configure Informatica Server
 - Informatica Server (Siebel Data Warehouse Server)
 - Workflow Manager

In addition, if you have an earlier version of Siebel Analytics and Siebel Data Warehouse installed, and are upgrading to this version, you need to upgrade Informatica.

Installing Informatica Software

This section describes the installation of the required Informatica PowerMart components. The Informatica installation has six major components:

- Server components (2)
 - Repository Server
 - Informatica Server
- Client components (4)
 - Designer
 - Repository Manager
 - Workflow Manager
 - Workflow Monitor

See the Informatica documentation for complete details of the Informatica installation.

NOTE: See [“Deploying Informatica and Siebel Data Warehouse in Non-English Environments” on page 27](#) for the appropriate settings for Informatica in non-English language environments.

Installing Informatica Repository Server

This section describes installation of the Informatica Repository Server.

To install Informatica Repository Server

- 1** In the Informatica Platform Products Setup—User Information page, enter your registration information and click Next.
- 2** In the Informatica Platform Products Setup—Select Components page check boxes, select all the components for installation except Metadata Reporter. Click Next.
- 3** Click through the Welcome to Informatica Repository Server 6.1 Setup screen.
- 4** In the Edit Service Account screen, enter the machine login information:

Field	Enter
Domain	Local machine or domain name of the user who has Administrator privileges
User	The Windows login user
Password	Password for this user

- 5** In the Choose Destination Location window, browse for and select the Repository Server destination folder. Click Next.
- 6** Click Next to proceed with the installation.

- 7 When the installation is complete, click Next again.

In the Configure Repository Server screen, enter the Server Port Number and Administrator Password.

NOTE: The Server Port Number default is 5001.

Click OK.

- 8 In the Setup Complete window, click Finish.

Installing the Informatica Server

This section describes the installation of the Informatica Server.

To install the Informatica Server on the Data Warehouse Server

- 1 In the Informatica Platform Products Setup—User Information page, enter your registration information and click Next.
- 2 In the Informatica Platform Products Setup—Select Components page check boxes, select the PowerMart 6 OEM for Siebel component for installation. Click Next.
- 3 Click through the Welcome to Informatica Repository Server 6.1 Setup screen.
- 4 Enter the Domain Name, user and Password for the Informatica Service.
- 5 Accept the default location or specify the location.
- 6 Click Next to proceed with the installation.

Changing Informatica Database .dll Files

From Informatica\PowerMart Server\bin directory, replace the Informatica-installed .dll files with similarly-named patch files from the ETL Bridge CD-ROM folder \Informatica_Patches:

- PMSqlsev.dll
- PMDB2.dll

Installing Informatica Client

This section describes installation of the Informatica client, which is used to build and administer the Siebel Data Warehouse.

- Informatica Designer configures and updates the Siebel Data Warehouse mappings, transformations, and metadata.
- Informatica Repository Manager restores and manages the Siebel Data Warehouse repository.
- Informatica Workflow Manager executes the workflows.
- Workflow Monitor monitors the status of workflows and sessions.

See the Informatica *installation and configuration guide* for the following procedure.

To install PowerMart Client on the Administrator Workstation

- 1** Click through the Welcome and License Agreement screens.
- 2** In the Destination Location screen, accept the default location or specify another, and then click Next.
- 3** Click through the Select Program Folder screen.
- 4** In the Select Components screen, select only the installation component Program and Configuration files. Click Next.
- 5** Proceed with the installation. In the RegSvr32 window, click OK.
- 6** In the Setup Complete screen, click Finish.

Data Code Pages Validation

At the end of the Informatica installation, on the Setup Complete page, clear the check box for Enable Data Code Pages Validation if either one of these two conditions is true:

- If the source and target databases are Unicode

- If the source or target database code page is different from the Informatica server operating system's code page

Prerequisites to Setting Up the Siebel Data Warehouse

Before you execute the workflows with Informatica, you must do the following:

- Restore the Informatica repository and create the data warehouse tables.

These tables are empty until populated by the predefined batches as covered in [Table 20 on page 98](#), Predefined Full Load Workflow Processes.

- Make sure that a role named SSE_ROLE is created for both Siebel Data Warehouse and Siebel transactional database.

Installing the Siebel Data Warehouse

The Siebel Data Warehouse consists of the following components:

- Siebel Data Warehouse repository (Informatica repository)
- Star schema tables that hold the Siebel Data Warehouse information (populated by Informatica)

These two components are installed in different databases.

NOTE: Before you run the Installation Wizard, make sure that the Siebel Data Warehouse database has been created by a database administrator.

Installing the Siebel Data Warehouse

- You must install the Siebel Data Warehouse through the Siebel Data Warehouse Installation Wizard.

In the Prerequisite Check screen, you select the data warehouse for the Siebel eBusiness (Horizontal) or the Siebel Industry (Vertical) application to install. The installation wizard creates a Start Menu item and Windows Desktop icon. Clicking this Desktop icon after the installation runs a second wizard to configure the Siebel Data Warehouse repository.

NOTE: If you are installing to a UNIX operating system, you will need to run the Siebel Analytics Installer on a Windows platform in order to install Siebel Data Warehouse tables, because this Wizard is a Windows-only application.

- You may install either from the installation CD-ROM or from a network location that contains the installation files.
- Use this installation wizard on English-language (ENU) installations only, not on PSE (pseudo-language code).

NOTE: Only the Siebel Data Warehouse installation-specific screens are described in detail in this book. For a description of the other screens, plus a more detailed procedure for the installation, see *Siebel Analytics Installation and Configuration Guide*.

To install the Siebel Data Warehouse using the Siebel Data Warehouse installer

1 Run the program setup.exe.

(On Windows 2000, an Installshield message screen may appear, stating that an older version of the Windows Installer is being used. Ignore this message. Close the message window and proceed with the installation.)

The installation wizard prompts you through each screen. For details of Steps 1 through 12, see *Siebel Analytics Installation and Configuration Guide*. The first twelve screens are:

- (1) License Agreement
- (2) Prerequisite Check
- (3) DSN Configuration
- (4) Destination Folder
- (5) Setup type
- (6) Cache Configuration
- (7) Language selection
- (8) COM Service Type
- (9) Logon Service
- (10) Temporary Folders
- (11) Mail Server
- (12) Scheduler Server

2 Prerequisite Check screen: Select one or more choices as appropriate.

- a** Database client type:

- For Siebel Analytics operational applications installation only:
If you are using MS SQL Server for your transactional database or data warehouse, the installer proceeds to the DSN Configuration screen. You set up the Data Source Names (DSNs) using the Microsoft ODBC Driver Manager. (The actual configuration is done after all the files have been copied. Choose the database connectivity client from the choices given.)
 - For other databases, you are not prompted for DSN configuration. However, you should set up the DSNs appropriately later. For example, for IBM DB2, use the DB2 Client Configuration Assistant to set up the database connectivity and DSNs.
- b** If you are installing a data warehouse, specify which one:
- Horizontal (Siebel Enterprise Application)
 - Vertical (Siebel Industry Applications)

NOTE: Although these options are not listed in the Prerequisite Check screen, you may also install one of the Siebel Analytics Bridge products. Depending on the specific bridge you are installing, see either Appendix A or Appendix B for additional information before continuing the installation. To complete a Siebel Analytics Bridge installation, select Horizontal (Siebel Enterprise Application).

3 Install the Siebel Data Warehouse.

You are prompted to create, delete, or configure an Informatica repository, or to create or drop Siebel Data Warehouse tables. The requested information is shown in the tables.

If you are installing DB2 UDB under OS/390, use the procedure in [Appendix C, “Installing and Configuring the Siebel Data Warehouse in DB2 for OS/390.”](#)

If you are installing to a UNIX operating system, you will need to run the Siebel Analytics Installer on a Windows platform to install Siebel Data Warehouse tables, because this Wizard is a Windows-only application.

For deployment in non-English language environments, see [“Deploying Informatica and Siebel Data Warehouse in Non-English Environments”](#) on [page 27](#).

CAUTION: If you are installing a Siebel Analytics Bridge, you must pause your installation at this point to replace the standard 7.5 Informatica repository (.rep) file with the Bridge-specific Informatica repository file. For further information regarding this procedure, see [Appendix A, “The Siebel 6.3 to 7.5 Analytics Bridges”](#) or [Appendix B, “The Siebel 7.0.4 to 7.5 Analytics Bridges.”](#)

- a Fill out the Setup Type page, using the following table as a guide, and click Next.

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

Option	Action
Create Informatica repository	For creating an Informatica repository into a fresh database or from an existing data warehouse, select this box. Note that if you select this option, you cannot select the Configure Informatica repository option.

Option	Action
Delete existing Informatica repository	For a new installation, this is not needed; leave unselected.
	For an installation from an existing data warehouse, select this box.
	For a failed installation (requiring a clean installation), select this box.
Configure Informatica repository (enter source and target information)	For creating an Informatica repository into a fresh database or from an existing data warehouse, select this box.
	Note that the repository server service must have been configured and be running before this step is possible. Also note that if you select this option, you cannot select the Create Informatica repository option.
Create Siebel Data Warehouse Tables	Select this to create star schema tables within the Siebel Data Warehouse. The Data Warehouse Server populates these star schema tables when you run a build process.
	For more information, see Chapter 4, “Administering and Troubleshooting the Siebel Data Warehouse.”
Drop existing Siebel Data Warehouse Tables	For a new installation, this is not needed; leave unselected.
	For an installation from an existing data warehouse, select this box.
	For a failed installation (requiring a clean installation), select this box.
	Select this to drop (remove) existing Siebel Data Warehouse (star schema) tables and create new Data Warehouse tables.

- b** Specify the connection (source) information to be used for the Siebel transactional database. This information will be placed in the Informatica repository, to be used by Informatica to access the Siebel transactional database. Fill out the form on this window using the following table as a guide, then click Next.

Field	Description
Platform	Choose the DBMS platform. If you choose MS SQL, then you must also fill out the MS SQL DBMS Name field.
Connect String	Enter the native connect string to the Siebel transactional database (or the database alias).
Table Owner	Enter a valid user name with database owner privileges of the Siebel transactional database.
Password	Enter the password (double-entry confirmation).
MS SQL DBMS Name	If you chose MS SQL as the platform above, then enter the name of the database. For DB2 and Oracle platforms, leave this blank.
Unicode	Select the option box if your database is Unicode.
ODBC Data Source	Enter the Data Source Name (DSN) for the Siebel transactional database.

- c** Specify the connection (target) information to the Siebel Data Warehouse. When you create the connections to the Siebel Data Warehouse on the Data Warehouse Server (read [“Creating Database Connections” on page 63](#)), it must use the same information. Fill out the form, using the following table as a guide, then click Next.

Fields	Description
Platform	Choose the DBMS platform. If you choose MS SQL then when you click Next, the installer prompts you for the MS SQL DBMS Name.
Connect String	Enter the native connect string or to the Siebel Data Warehouse (or database alias name). You created this connection on the Data Warehouse Server in “Creating Database Connections” on page 63 .
Table Owner	Enter a valid user name with database owner privileges of the Siebel Data Warehouse.
Password	Enter the password (double-entry confirmation).
ODBC Data Source	Enter the Data Source Name (DSN) for the Siebel Data Warehouse. You created this connection on the Data Warehouse Server in “Creating Database Connections” on page 63 . NOTE: Oracle users should select a Data Source that uses an Oracle ODBC driver and not a Merant ODBC driver. You created this in Step 2 of “To create database connections for Oracle installations” on page 64 .
Unicode	Select the option box.
Email address	Leave this field blank.

- d** If you selected “Delete existing Informatica repository” or “Drop existing Siebel Data Warehouse Tables” on the Setup Type window of the installer, then the installer displays the Siebel Old Data Warehouse Information window.

If you do not want to drop an existing Informatica repository or data warehouse tables, click Back until you get the Setup Type window of the installer, and clear the check boxes for “Delete existing Informatica Repository” and “Drop existing Siebel Data Warehouse Tables.”

NOTE: To check the status of the repository restoration, read the `dwdb.log` file.

- e** The Siebel Data Warehouse Tablespace Information screen is for Oracle use only. Specify the tablespace for the target data warehouse by clicking Next to use the default tablespace information.

- f** Specify the location of the Siebel Data Warehouse repository location (target) information in the Configure Informatica Service screen. (This repository can reside in any database.) Fill out the form, using the following table as a guide.

Field	Description
Platform	Choose the RDBMS platform.
Connect String	Enter the native connect string to the Siebel Data Warehouse.
Table Owner	Enter a valid database user.
Password	Enter a valid database password.
Administrator Login	Enter "Administrator."
Administrator password	Enter "Administrator."
MS SQL DBMS Name	If you chose MS SQL as the platform earlier, then enter the name of the database. For DB2 and Oracle platforms, leave this blank.
Repository Name	Enter a name for your Siebel Data Warehouse repository, such as "Siebel_DW_Rep."

When you click Next, the installer connects to the Siebel Data Warehouse and creates the following components:

- Informatica repository
- Data warehouse tables that hold the Siebel Data Warehouse information

NOTE: The default Informatica repository has the extension .rep.

At the completion of the Siebel Data Warehouse configuration during the initial installation, a Start Menu item and a desktop icon ("Siebel Data Warehouse Configurator") are created. Use these to perform subsequent incremental data warehouse configuration.

- 4** When the installation Wizard is finished, a screen prompt asks if you want to view the Readme file.

- 5 After the installation wizard is finished, check the log file and change the system variables as necessary.

To check the log file

- 1 Open \$INSTALL_DIR\dwdb\dwdb.log. This file shows the number of tables installed in the Siebel Data Warehouse.
- 2 Click Finish to close the window.

Post-Installation Wizard Tasks

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

- 1 Insert your license keys for any Siebel Data Warehouse Web components you installed. See the section on inserting Siebel Data Warehouse Web license keys in *Siebel Analytics Installation and Configuration Guide*.
- 2 Restart your computer before using the Siebel Data Warehouse software. The installation prompts you to restart the computer now, or at a later time. Select your preference and click OK.

Creating Database Connections

The Informatica Administrator Workstation needs an ODBC connection and a native connection to the Siebel Data Warehouse (which holds the Informatica repository), and a native connection to the Siebel transactional database, as shown in [Figure 4](#).

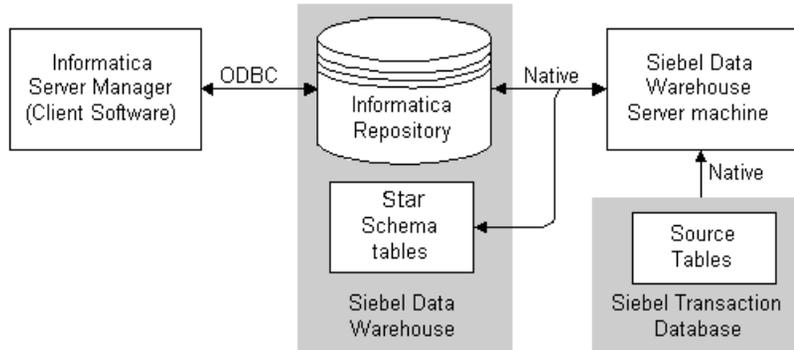


Figure 4. Native and ODBC Connections

To define the ODBC connections between the Administrator Workstation and the Siebel Data Warehouse, you need the setup information shown in [Table 15](#). You also use this same information when configuring Informatica.

Table 15. ODBC Connect Information for the Siebel Data Warehouse

Field	Description
Connect String	The native connect string to the Siebel Data Warehouse. For DB2, use the Data Source Name. For Oracle, use the native connect string. For SQL Server, the connect string is the DSN for the OLAP and OLTP.
ODBC Data Source	The Data Source Name (DSN) for the Siebel Data Warehouse.

NOTE: When creating a password, do not use any spaces. Also, the password must not be blank (null).

To create database connections for DB2 installations

- 1 Using DB2 Client Configuration Assistant, create a database connection to the Siebel Data Warehouse, the Siebel transactional database, and the Siebel Data Warehouse repository. Use the parameters in [Table 15 on page 64](#).
- 2 In the ODBC control panel, System DSN tab, create an ODBC connection to the Siebel Data Warehouse using an ODBC driver.
- 3 Test the connections to make sure they work.

To create database connections for Oracle installations

- 1 Using Net8 Assistant, create a native connect string (net service name) to the Siebel Data Warehouse, the Siebel transactional database, and the Siebel Data Warehouse repository. Use the parameters in [Table 15 on page 64](#).

- 2 In the ODBC control panel, System DSN tab, create an ODBC connection to the Siebel Data Warehouse using an Oracle 8 ODBC driver.

NOTE: Use an Oracle 8 driver (32 bit to 64 bit) for an Oracle 9i Siebel Data Warehouse. The connection only succeeds with Oracle 8 drivers.

- 3 In the ODBC control panel, System DSN tab, create an ODBC connection to the Siebel Data Warehouse using the Merant Closed driver. This ODBC driver was installed during Informatica Client installation (the exact name depends on the specific release of Informatica being used).
- 4 Test the connections to make sure they work.

To create database connections for SQL Server installations

- 1 Create a database connection to the Siebel Data Warehouse, the Siebel transactional database, and the Siebel Data Warehouse repository. Use the parameters in [Table 15 on page 64](#).

NOTE: For SQL Server running Unicode-configured databases, you must specify the database type ODBC.

- 2 In the ODBC control panel, System DSN tab, create an ODBC connection to the Siebel Data Warehouse using a SQL Server ODBC driver.
- 3 Test the connections to make sure they work.

Configuring the Informatica Servers

This section covers the configuration of the servers and clients used by Informatica. These include:

- Informatica Service
- Repository Server
- Informatica Client Console for Host Server
- Informatica Repository

- Environment Variables for Informatica Server Under UNIX
- Informatica Server
- Informatica Client
- Informatica Server Database Connection

Configuring the Informatica Service

This configuration follows the installation of the Informatica servers.

To configure the Informatica Service

- 1 The Configure Informatica Service screen appears. Make sure the settings shown in the following table are selected for each tab.

Settings for each tab are shown in the following table

The screenshot shows a dialog box titled "Configure Informatica Service - Version [6.1]". It has four tabs: "Keys", "Server", "Repository", and "Compatibility and Database", with "Configuration" also visible. The "Keys" tab is active, displaying a "License Keys" section with the following labels and input fields:

Label	Input Field
Platform Key:	<input type="text"/>
Oracle Key:	<input type="text"/>
Sybase Key:	<input type="text"/>
Infomix Key:	<input type="text"/>
Microsoft SQL Server Key:	<input type="text"/>
DB2 Key:	<input type="text"/>
ODBC Key:	<input type="text"/>
Teradata Key:	<input type="text"/>

At the bottom of the dialog box are four buttons: "OK", "Cancel", "Apply", and "Help".

Tab	Information Required
Keys	Enter the applicable license keys for your installation. When finished, click OK. (Obtain the license key information from the license key letter.)
Server	Configure SIEBEL_DW_SERVER. In the Load Manger section, make sure that the maximum number of concurrent sessions is not greater than 15 and shared memory is not greater than 3000000.
Configuration	Specify whether to use ASCII or UNICODE. If you select UNICODE, clear the Validate Data Codepages check box.
Compatibility and Database	Make sure that the Database settings section Treat CHAR as CHAR on read is selected and that the maximum number of connections is 100.
Repository	Enter the repository name (Siebel_DW_Rep), the repository user and password, the repository server host name, and the repository server port number (5001). Click OK.

- 2 In the Informatica Server Setup Application—Options screen, click Exit.
- 3 In the Setup Complete screen, click Finish.

Configuring the Repository Server Using the Repository Administration Console

After you restore the Informatica repository on the Administrator Workstation, you need to configure it. Set up and configure the repository connectivity, and then set up the client to point to the correct Informatica Server (Data Warehouse Server) machine.

Before you configure the Informatica Server, make sure that the Informatica server and Repository server are not running.

To stop the Informatica server and repository

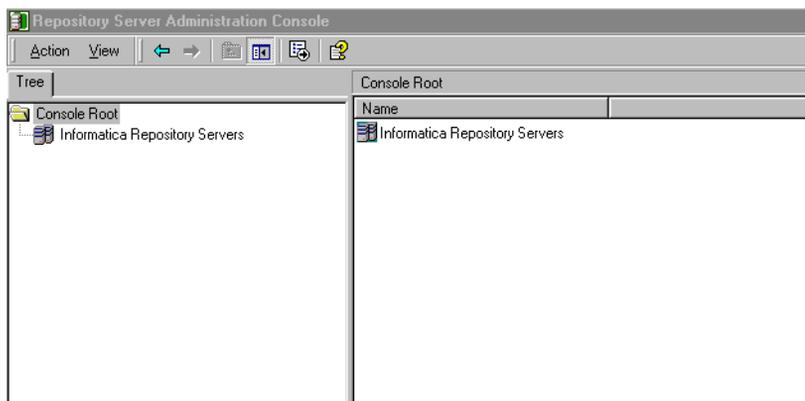
- 1 Start the Informatica Repository Server.

- 2** If you are installing under Windows, proceed to step 2a.
If you are installing under UNIX, skip step 2a and proceed to step 2b.
 - a** In Windows Services, start the Informatica Repository Server.
Always check the log file in the Informatica directory.
 - b** In UNIX, start the repository server.
 - ❑ Navigate to /export/home/informatica/repositoryserver.
 - ❑ Type pmrepserver.
 - ❑ Check the pmrepserver.log file.

Once you have stopped the servers, use the PowerMart Repository Server Administration Console for this configuration procedure.

To configure the Informatica repository server

- 1** Navigate to Start > Programs > Informatica Powermart 6.1 OEM for Siebel—Client. Click the Repository Server Administration Console to open it.



- 2** In the main menu, click Action > Add a new Server Registration.
 - a** Enter the host name (the machine that has the repository).
 - b** Accept the default port number 5001.

Configuring Informatica Client Console for Host Server

To change Informatica Server host name

NOTE: Make sure Informatica server and Repository server are running. If they are not, start them.

- 1** In the Informatica PowerMart Client, open Workflow Manager.
- 2** Connect to the repository host by double-clicking Siebel_DW_Rep repository.
- 3** In the Connect to Repository box, enter “Administrator” in both Username and Password fields.
- 4** Right-click SIEBEL_DW_SERVER and select Edit.
- 5** In Edit Relational Connection, make sure you point to the right transactional database and analytical database.
- 6** If you switch from one database platform to another database platform, change the connections:
 - a** Add a new connection.
 - b** Replace the relational connection for your transactional and analytical databases by clicking Connection > Replace.
- 7** Connect to SIEBEL_DW_SERVER.
 - a** Enter the Host Name IP address.

NOTE: In UNIX, the host server will not be automatically resolved. You must type in the right IP Address of the Informatica Server.

- b** Click Advanced and specify the path for the log directory for the session log.

- 8 After connecting to SIEBEL_DW_SERVER, you can open Workflow Monitor to monitor your load.

NOTE: Make sure SIEBEL_DW_SERVER is connected online.

Verifying the Informatica Server Host Name

After changing the Server host name, verify the name change.

To verify that Informatica Server host name has been changed

- 1 Right-click SIEBEL_DW_SERVER and select Monitor.

A red triangle appears next to the SIEBEL_DW_SERVER icon.

- 2 In Workflow Manager, highlight Siebel_DW_Rep. Click Server Configuration from menu bar and select Database Connections.

The Database Connections window opens. If you selected Configure Informatica Repository (enter source and target information) from the Siebel Data Warehouse installation, the Siebel Data Warehouse and Siebel transactional database should be configured already.

- 3 Highlight OLAP and click Edit button. Verify that all information for target database is correct. In Data Source field, verify that it is OLAP. Click OK or Cancel.

The target information should be the same as during the Siebel Data Warehouse installation.

NOTE: If using an Oracle Unicode database, select UTF-8 encoding of Unicode in Code Page field. For other Unicode databases, use the default Code Page.

- 4 Highlight OLTP and click Edit. Verify that all information for source database is correct. In Data Source field, verify that it is OLTP. Click OK or Cancel.

The target information should be the same as during the Siebel Data Warehouse installation.

Configuring the Informatica Repository

Configure the Informatica repository using the following procedure.

To configure the Informatica repository

- 1** Start the Informatica Workflow Manager.
- 2** In the Repositories list, select the SIEBEL_DW_REP repository.
- 3** Pull down the Repository menu and choose Connect.
The Connect to Repository window opens.
- 4** Log in using the Administrator account (the password is also Administrator).
- 5** Click Connect.
- 6** Once connected, select the SIEBEL_DW_Server under the SIEBEL_DW_REP icon.
- 7** Pull down the Server Configuration menu and choose Edit Server.
- 8** In the Host Name field, enter the Computer Name (as shown in the Network control panel) of the Data Warehouse Server.
- 9** Optionally, configure the Code Page setting:
 - If the Data Warehouse Server uses AIX or Solaris, pull down the Code Page menu and choose Western European.
 - If the Data Warehouse Server uses Windows, leave the setting unchanged.
- 10** Click Advanced. In the Advanced window, check to see if \$PMRootDir points to the directory where the Informatica server is to be installed, as in the following examples.
 - For Windows platforms:
`C:\Program Files\Informatica\PowerMart Server`
 - For UNIX platforms:

`/export/home/informatica/pm`

NOTE: If you follow the recommended installation, the Informatica server installs on the Data Warehouse Server. If you install it on a different directory, make sure to update the \$PMRootDir variable with the new location.

- 11** Close the Server window.

Some error messages appear in the Messages pane. These are normal because the Informatica Server is not yet installed.

- 12** Select Siebel_DW_Server, right-click it, and choose Monitor a process.

A process monitoring window opens. Use this window monitor the Siebel Data Warehouse loading process.

- 13** Exit from Informatica PowerMart Workflow Manager.

Starting the Informatica Service Under Windows

The following procedure shows how to set up the Informatica service on Windows.

To start the Informatica Service on Windows

- 1** In the Control Panel, open the Services panel.
- 2** Select the Informatica service, then double-click it.
- 3** In the Startup Type frame, select Automatic. In the Log On As frame, select System Account, then click OK.

NOTE: Do not use System Account if you plan on using email notification. Use “This account” with the appropriate user name and domain.

- 4** In the Services control panel, click Start to start the Informatica Service.

NOTE: If the Informatica Repository Manager and Workflow Manager are not pointing to the Siebel Data Warehouse, the Informatica service cannot start.

- 5 Close the Services control panel.

Setting the Environment Variables for Informatica Server Under UNIX

Before configuring the server, add setenv variables to .cshrc.

- For Solaris, in the root directory, add these to command lines to .cshrc:

```
setenv PATH /export/home/informatica/pm:.${PATH}

setenv LD_LIBRARY_PATH /export/home/informatica/
pm:${LD_LIBRARY_PATH}

setenv PATH /export/home/informatica/
repositoryserver:.${PATH}

setenv LD_LIBRARY_PATH /export/home/informatica/
repositoryserver:${LD_LIBRARY_PATH}
```

- For AIX, in the root directory, add these command lines to .cshrc:

```
setenv PATH ${PATH}:/export/home/informatica/pc:.

setenv LIBPATH ${LIBPATH}:/export/home/informatica/pc

setenv PATH ${PATH}:/export/home/informatica/
repositoryserver:.

setenv LIBPATH ${LIBPATH}:/export/home/informatica/
repositoryserver
```

- For HP-UX, in the root directory, add these command lines to .cshrc:

```
setenv PATH /export/home/informatica/pm:.${PATH}

setenv SHLIB_PATH /export/home/informatica/pm:${SHLIB_PATH}

setenv PATH /export/home/informatica/
repositoryserver:.${PATH}

setenv SHLIB_PATH /export/home/informatica/
repositoryserver:${SHLIB_PATH}
```

Configuring Informatica Server

Depending on your platform, Informatica installations may require additional configuration steps. Three special cases are installing on UNIX operating systems, running native databases in Japanese or other double-byte code pages, and running Oracle and SQL Server together.

- For installations under UNIX, install the Informatica software directly from the CD-ROM.

NOTE: If you cannot install the software directly, you must use ftp in binary mode. Otherwise, the installation will fail.

- Informatica Server (Data Warehouse Server) must be run using Code Page 1252. For example, Japanese users need to run the ETL process from a machine that has an English-language version of Microsoft Windows installed. In addition, use a period as the decimal delimiter for this server to function properly.

Although the Informatica server must be run on a Code Page 1252 operating system, the data source and target can be on any Siebel Systems-supported code page, including non-European and double-byte, provided that the data source and data target code pages are the same.

- If you are using both SQL Server 2000 and Oracle (for example, Oracle for the Siebel transactional database and SQL Server 2000 for the Siebel Data Warehouse), then follow the procedural steps relating to odbcbcp.dll.

To configure Informatica Server

- 1 At the prompt, enter

```
./pmconfig
```

- 2 Alter the pmconfig script.

```
+-----+
+ Informatica Server Configuration Utility +
+ Copyright (c) Informatica Corp. 1996-2001+
* All Rights Reserved. +
+-----+

Configuration file name [pmserver.cfg]:
```

```
ServerPort[4001]:  
RepositoryName[RepositoryName]: Siebel_DW_Rep  
DBUser[DatabaseUser]: _____  
DBPassword[*****]: _____  
PMUser[Administrator]:  
PMPassword[*****]:  
DatabaseType[Oracle]:  
ConnectionString[]: _____  
ErrorLogFile[pmserver.err]:  
EventLogFile[pmserver.log]:  
PerformEventLogging[Yes]:  
DataMovementMode[ASCII]:  
MaxSessions[10]:  
LMSharedMem[2000000]:  
KeepRepeatSessionInShm[No]:  
LMStayConnectToRepositDuration[300]:  
PMCacheDir[.]:  
PlatformKey[enter_unix_platform_key]: _____  
OracleKey[enter_oracle_database_key]: _____  
SybaseKey[enter_sybase_database_key]:  
InformixKey[enter_informix_database_key]:  
DB2Key[enter_db2_database_key]: _____  
ODBCKey[enter_odbc_database_key]: _____  
DisableRecovery[No]: Yes  
DisableRecovery[No]: Yes
```

```
OverrideExecLocking[0]:
DateHandling40Compatibility[No]:
Pmserver3XCompatability[0]:
AggregateTreatNullAsZero[0]:
AggregateTreatRowAsInsert[0]:
OracleVersion[7]: 8
DateDisplayFormat[DY MON DD HH24:MI:SS YYYY]:
ValidateDataCodePages[Yes]: No
LoadManagerAllowDebugging[No]:
CreateIndicatorFiles[No]:
XMLWarnDupRows[No]:
MaxLookupSPDBConnections[0]:
MaxSybaseConnections[100]:
MaxMSSQLConnections[100]:
SybaseIQLocalToPmServer[No]:
NumOfDeadlockRetries[10]:
DeadlockSleep[0]:
ValidateDataCodePages[No]: <----existing>
SessionLogInUTF8[No]:
<end>
```

Configuring Informatica Client

Configure the Informatica client in the same manner as Informatica Server (Data Warehouse Server) for Windows, and include the following steps.

To configure the Informatica client

- 1** In Informatica Workflow Manager, right-click SIEBEL_DW_SERVER and select Edit.
- 2** In the Host Name (Name or dotted IP address) field, enter the machine name of where Informatica Server will be running.
- 3** Enter the UNIX machine name where Informatica Server is running from.
- 4** Click Advanced.
The Server Variables section appears.
- 5** In Code Page field, select ISO 8859-1 Western European.
This code page is for UNIX environment.
- 6** In the Attribute Value column of row 1, change the value to that of the path of the PowerMart server directory.

Configuring Informatica Server Database Connection

From the menu bar, click Server Configuration and select Database Connections. When you have completed this process, you proceed to build the Siebel Data Warehouse.

To configure the Informatica Server database connection

- 1** For both transactional and data warehouse databases, use the default value for the Code Page field.
- 2** Start Informatica Server Service.
 - a** At the Informatica Server root directory, enter pmserver to start the service.
 - b** Check pmserver.log file to see if it has started successfully. It has started successfully if it says Server initialization completed successfully.
- 3** To stop the server, enter

```
./pmcmd stopserver <repository username> <repository password>  
<port #>.
```

For example:

```
./pmscmd stopserver Administrator Administrator 4001
```

- 4** Check whether Informatica server is running by entering the command

```
ps -elf |grep pmsserver.
```

If it lists pmsserver process, the server is running. If it lists grep pmsserver, that is the process of the ps command.

- 5** Set environment for Unicode if both the transactional and data warehouse data sources are Unicode.

- a** Add the following environment variables.

- For Oracle, enter:

```
setenv NLS_LANG american_america.UTF8
```

- For a localized database under Oracle, change the NLS_LANG setting to the localized language and create a new ODBC connection. For example, for ESN localization, enter:

```
setenv NLS_LANG spanish_spain.UTF8
```

- For DB2, enter:

```
setenv DB2CODEPAGE 1208
```

CAUTION: Do not put these setenv commands in the .cshrc file. Other machines and usernames also use this file, and this command will corrupt their non-Unicode environments.

- b** For all UNIX platforms, if both the transactional and data warehouse data sources are Unicode, add the following line to pmsserver.cfg:

```
SiebelUnicodeDB=<oltp_tableowner>@<oltp_connectstring>  
<olap_tableowner>@<olap_connectstring>
```

NOTE: There should be a space between <oltp_connectstring> and <olap_tableowner>.

For example:

```
SiebelUnicodeDB=siebel@DB204166 siebel@DB204167
```

- 6** In Informatica Workflow Manager, right-click SIEBEL_DW_SERVER and select Edit.
- 7** Click on Advanced. In Code Page field, select ISO 8859-1 Western European.
This code page is for the UNIX environment, not Unicode-specific.
- 8** Click Server Configuration from menu bar and select Database Connections.
- 9** If you are using Oracle Unicode database, select UTF-8 encoding of Unicode in Code Page field, for both transactional and data warehouse databases. For other Unicode databases, use the default Code Page.

Siebel Data Warehouse Data Code Pages Validation

After installing the Informatica Server, Repository Server, and client tools, add the following section to the powermart.ini file located in the Informatica Client directory:

```
[Code Pages]  
  
ValidateDataCodePages=No
```

Applying the .SIF File

You must apply a Siebel Information File (.sif file), provided on the Siebel Analytics CD-ROM, to create the S_ETL_REF_PARAM table in the Siebel transactional database. This table is required to execute the ETL routines.

NOTE: This is *not* the .sif file used with the Siebel Analytics Bridges.

Locate the s_etl_ref_param.sif file in the \SIFPatchFiles folder. Proceed as described in [Appendix D, “Applying SIF Patches.”](#)

After the .sif file has been applied, proceed to build the Siebel Data Warehouse.

Upgrading the Informatica Platform

If you have an earlier version of Siebel Data Warehouse installed, and are upgrading to this version, you need to do a platform upgrade for Informatica.

This section describes the general approach taken to upgrading your Siebel Data Warehouse and Informatica repositories. For specific details, see the Informatica documentation.

Table 16. Informatica Platform Upgrade Path

What to Upgrade	Old Version	New Version
Informatica	5.1.2	6.1
Siebel Data Warehouse Repository	7.5.211	7.5.3

NOTE: It is recommended that you back up the existing repositories for future reference, or in case there are problems during the upgrade.

To upgrade your version of Informatica

- 1 In Informatica client, open Repository Manager.

NOTE: Back up the older Informatica repository only from within that version of Informatica.

- 2 From the menu, select Repository > Backup repository.
- 3 Disconnect the Siebel Data Warehouse Repository.
- 4 Run the Siebel Data Warehouse Configurator.
 - a In the Setup Type screen, select the Delete existing Informatica Repository check box, and click Next.
 - b In the Siebel Data Warehouse Repository information screen, provide the required information, and click Next.

- c** In the DwSetup dialog, click Yes.
- 5** Uninstall the older version of Informatica.

NOTE: Uninstall earlier versions of Informatica before installing Informatica 6.1 PowerMart.

- 6** Reboot the computer after uninstalling the older software.

Upgrading the Data Warehouse Schema Using *upgrep_dw*

You can upgrade the Siebel Data Warehouse 7.0.4 schema to the 7.5.3 schema using the *upgrep_dw* batch file.

To upgrade the Siebel Data Warehouse 7.0.4 schema to 7.5.3 schema using the *upgrep_dw* file

- 1** Navigate to the following directory:

Windows: < SIEBEL_ROOT > \dbsrvr\DBPLATFORM

UNIX: \$ < SIEBEL_ROOT > /dbsrvr/DBPLATFORM

Where SIEBEL_ROOT is the path of the Siebel Server installation directory. For example, if you specified C:\sea7xx as the installation path, then SIEBEL_ROOT is C:\sea7xx\siebsrvr.

- From any shell, open the script `upgrep_dw.bat` (Windows) or `upgrep_dw.ksh` (UNIX), and edit the `CHANGE_ME` values of the following parameters as appropriate for your deployment:

Parameter	Value
<code>SIEBEL_HOME =</code>	The directory where you installed the Siebel Server. For example, <code>C:\sea7xx\siebsrvr</code> (Windows).
<code>DBSRVR_ROOT =</code>	The directory where you installed the Siebel Database Server files on the Siebel Server. For example, <code>C:\sea7xx\dbsrvr</code> (Windows).
<code>DATABASE_PLATFORM =</code>	The database platform. For example, <code>db2udb</code> , <code>oracle</code> , or <code>mssql</code> .
<code>ODBC =</code>	ODBC data source name of the source database. For example, <code>Siebsrvr_Siebel</code> .
<code>SRC_TBLO =</code>	Tableowner of the source database.
<code>SRC_TBLO_PSWD =</code>	Tableowner password for the source database.
<code>DATA_AREA =</code>	Database storage area (tablespace) for tables.
<code>INDX_AREA =</code>	Database storage area (tablespace) for tables.

- Save and close the file.
- Execute the script from the command line.
- Review the `upgrep_dw.rep` log file to verify the upgrade was successful.

NOTE: For more information on error messages when running the `upgrep_dw`, see Alert 958, in the Siebel Alerts section on SupportWeb.

Installing and Configuring the Siebel Data Warehouse

Upgrading the Data Warehouse Schema Using upgrep_dw

Setting System Preferences and Using Exception Reports

3

This section describes how to configure the System Preferences to optimize the Extraction-Transform-Load process.

The System Preferences contain settings that are customized to your installation. Many preferences have default values, but all preferences should be checked to make sure they are correct for your installation.

Navigate to the System Preferences view (Site Map > Application Administration > System Preferences). There are many System Preferences covering many products. [Table 17](#) lists the preferences for Siebel Analytics.

Table 17. System Preferences for Siebel Analytics

Preference Name	Comments
ETL Alignment Version	<p>Set this to N if you want to make changes to existing alignment.</p> <p>Set this to Y if you want to create a new alignment version. These preferences are used by Life Sciences to control loading of changes in assignment rules in Siebel Assignment Manager.</p> <p>Note that configuration of the ETL Alignment flag is different for the Siebel ePharma 6.3 to 7.5 Analytics Bridge. See “Using ETL Alignment Version System Preferences” on page 86.</p>
ETL Analysis End	<p>When extracting data from the data sources, this is the ending date range to include. Make sure it follows the format specified in the ETL Date Format preference. Suggestion: to extract the most current information, set this to a date in the future, such as December 31, 2055 (20551231).</p>
ETL Analysis Start	<p>When extracting data from the data sources, this is the earliest date range to include. Make sure it follows the format specified in the ETL Date Format preference.</p>

Table 17. System Preferences for Siebel Analytics

Preference Name	Comments
ETL Base Exchange Currency	Set the base currency to which all the financial amounts will be converted.
ETL Date Format	Set the format to be used for representing dates. The typical format is: YYYYMMDD.
ETL Default Continent	Set the default continent, such as North America.
ETL Default Country	Set the default country, such as USA.
ETL Default Currency	Set the currency that will be used in the Siebel transactional database, such as USD for US Dollars, if the currency for an amount is not specified.
ETL Default Language	Set the default language, such as ENU for English.
ETL LOV Maximum Value	Leave this as 9999999999 unless you have a special need to reduce this maximum.
ETL LOV Minimum Value	This is 0 (zero) unless you have a special need to increase this minimum.
ETL Unknown Exchange Rate	Set the exchange rate to be used for unknown currencies. Typically this is set to 1.
Siebel Web Engine Server	Set this to the URL of your Siebel Web Server Engine. Example: http://www.siebel.com .
SqlStyle	Identify the RDBMS used for the data warehouse. Enter either DB2, Microsoft SQL Server, or Oracle.
SubSqlStyle	For DB2 installations only, specify: DB2UWO.

Using ETL Alignment Version System Preferences

Seed data needs to be updated in certain Lists of Values (LOV) to make sure that the ETL process correctly populates the alignment type and product category relationships in the Siebel Data Warehouse.

Changing the ETL Alignment Version System Preferences

These preferences are used by the Siebel Life Sciences operational database to control loading of changes in assignment rules in Siebel Assignment Manager.

To change the alignment version system preferences

- 1 Using a standard text editor, open the SysPrefDelta.dat file.
- 2 Change the Y/N value to the desired setting:
 - If you want to make changes to the existing alignment, set Alignment Version to N.
 - If you want to create a new alignment version, set Alignment Version to Y.
- 3 Save the file.
- 4 Run the full or incremental ETL batch as you would normally.

The changes will occur during the loading process as a part of pre-request loading; alignment loading will be processed according to the setting.

Using the Exception Report and Diagnostic Views

Exception reports provide insight about the source data used for the ETL processes. They provide information about the source data that can lead to erroneous results in the Siebel Data Warehouse or may cause data loss during the ETL process. These reports point out some of the known problematic areas, but they should not be relied upon to find all potential data inconsistencies in the source data.

Understanding Exceptions

Exception reports are defined for the following components:

- **List of Values.** Identifies gaps and overlaps for certain LOV types.
- **Cost Lists.** Identifies products for which the cost lists have not been defined. Identifies the cost lists which define costs for a product in a certain currency for overlapping periods of time.

- **Exchange Rates.** Currency Exchange rates that do not change over a period of time. If exchange rates are not defined for more than 30-day intervals, then they are flagged as an exception.
- **Hierarchies.** Entities that have circular references are flagged as exceptions. The Siebel Data Warehouse supports 10 levels of hierarchies. If there are entities that have more than 10 levels of hierarchies defined, they are flagged as exceptions.

List Of Values Exceptions

List of Values include High and Low values that can be used as bucket values in categories for effective analysis. If these values are not contiguous (such as gaps or overlaps in defined values), the ETL process cannot accurately categorize the values.

An example of List of Values exceptions is shown in [Table 18 on page 88](#).

Table 18. List of Values Exceptions (Example)

Type	Name	Low	High
MY_TYPE	< 100	10	100
MY_TYPE	80 – 200	80	200
MY_TYPE	250 – 300	250	300
MY_TYPE	350 – 400	350	400

Notice that, in the example for Type MY_TYPE, there are overlaps and gaps between records. There is an overlap of ranges between the first and second row. There is a gap between second and third row, and between third and fourth rows.

The following LOV types are analyzed for List of Value Exceptions:

- ACCNT_REVENUE_SIZE
- ACCNT_EMP_SIZE
- LEAD_AGE_DAYS
- OPTY_REVENUE_SIZE

- OPTY_UNIT_SIZE
- ACCNT_REVENUE
- QUOTE_AGE_DAYS
- ACCNT_REVN_GROWTH
- APPROVAL_AUTH_SIZE
- SR_CHART_AGE
- ASSET_COST_CATEGORY

Cost List Exceptions

Cost Lists for specified products and currency should not have overlapping time periods. If multiple cost lists are defined for a product and currency during a given time period, then the cost for the product may not be computed correctly in the Siebel Data Warehouse.

An example of Cost List exceptions is shown in [Table 19 on page 89](#).

Table 19. Cost List Exceptions (Example)

Cost List	Product Name	Currency	Start Date (MM-DD-YYYY)	End Date (MM-DD-YYYY)	Cost
Cost List 1	Product 1	USD	01-01-2000	12-31-2000	10.00
Cost List 2	Product 1	USD	06-01-2000	06-01-2001	12.00
Cost List 3	Product 1	USD	06-01-2001	06-01-2002	13.00

In the example, Cost List 1 and 2 have definitions of cost overlapping over 06-01-2000 to 12-31-2000.

Products Without a Cost List

During the ETL process, the costs of the products are calculated based on the Cost List table. If the cost lists are not defined correctly, the cost of the products cannot be calculated correctly in the Siebel Data Warehouse. This exception mapping queries the product table and looks for a minimum of one cost list to be defined. The products with no cost list definition are flagged as exceptions.

Exchange Rate Exceptions

The Siebel Data Warehouse supports transactions in many different currencies. Siebel Analytics converts all currencies in the Siebel Data Warehouse to a single currency for analysis purposes. The ETL Base Exchange Currency parameter in System Preferences, indicates the currency to which all the financial amounts will be converted. The Exchange rates are derived from the Exchange Rate tables in the Siebel transactional database. If the currency exchange rates do not change for a period of 30 days, then Siebel Analytics flags it as an exception.

If there are time period gaps in the exchange rate data, the ETL process defaults to the most recent recorded exchange rate. If the actual exchange rate is significantly more or less favorable than what is recorded in the database, the outdated exchange rate distorts the true value of currency amounts in the Siebel Data Warehouse.

NOTE: Exchange rates are derived from records that are of type “Daily” in the Siebel transactional database. If any other types have been defined, they are not handled without some customization.

Invalid Hierarchy Exceptions

Accounts, divisions, products, and opportunities can all have hierarchical relationships. These entities are denormalized within the Siebel Data Warehouse database to a fixed number of levels. Siebel Analytics supports up to ten hierarchies levels in the Siebel transactional database. If the depth of hierarchies extends beyond this number, results become inconsistent or incomplete.

Circular Hierarchy Exceptions

Circular Hierarchies arise when the parent-child relationship has a circular references. For example:

Child	Parent
A1	A2
A2	A1

Siebel Analytics flags exceptions for two levels. Circular references over two hierarchies are not flagged. For example:

Child	Parent
A1	A2
A2	A3
A3	A1

These produce infinite levels of hierarchies. The same records will be captured under the Invalid Hierarchy exceptions as their hierarchy depths will increase beyond 10 levels.

Executing Exception Reports

Before loading the Siebel Data Warehouse for the first time and for the subsequent refreshes, you should plan to spend time cleansing your Siebel transactional database data using the exception reports. The process is iterative, and requires coordination with other team members who have responsibility for data in the Siebel transactional database, such as the Siebel database administrator. After the initial cleansing, you should generate the exception reports on a scheduled basis to maintain the integrity of your data.

NOTE: Rerunning the exception reports overwrites all data contained in this view.

To cleanse the Siebel transactional database, repeat these actions until the exception report is empty:

- In Informatica Workflow Manager, run the Exception_Reports batch.
- In the Siebel user interface, navigate to Analytics Administration > Exception Reports.

NOTE: In Siebel Financial Services, this screen is called DataMart Administration.

- For every line in the ETL Exception Reports list, fix the cause of the problem. For information on fixing problems, see [“Cleansing Data.”](#)

Cleansing Data

Use a combination of the Exception Reports and the Diagnostic views to assess changes that need to be made external to the Siebel transactional database, and changes to the Siebel transactional database directly.

The ETL Exception Reports list contains one record for each exception flagged in the Siebel transactional database. The ETL Exception Explanation form, located below the ETL Exception Reports list, describes the selected exception, its effect on the Siebel Data Warehouse building process, and offers suggestions for repairing the data.

To fix an exception

- 1 Select an exception record.
- 2 Read and understand the text in the ETL Exception Explanation form.
- 3 Click the report link.

The object's data appears. (For example, if the object is an account, then the Account form appears. If the object is a cost list, then the Cost List list appears.)

- 4 Repair the problem, using the text in the ETL Exception Explanation form as a guide.
- 5 Return to the ETL Exception Reports list and place a check mark in the Fixed column to indicate to others that this exception has now been fixed.

Using the List of Values View

Use the List of Values view, shown in [Figure 5](#), to visually compare how the list of values data extracted from the Siebel transactional database coordinates with the values loaded into the Siebel Data Warehouse. The ETL process removes duplicates and overlaps and fills data gaps. Values are extended to span the List of Values (LOV) minimum and maximum values. Duplicates, Range Gaps, and Overlaps are flagged by the exception reports.

ETL History List of Values Exchange Rates Cost Lists						
Query Clear Cache 1 - 7 of 7+						
Type	Language Independent Code	Display Value	Low	High	Order	Language Name
ABS_COST_FCT_AREA	Field Service	Field Service			1	English-American
ABS_COST_FCT_AREA	Professional Services	Professional Services			2	English-American
ABS_COST_FCT_AREA	Workforce Management	Workforce Management			3	English-American
ABS_COST_FCT_TYPE	Normal	Normal			1	English-American
ABS_COST_FCT_TYPE	Emergency	Emergency			2	English-American
ABS_COST_FCT_VARIABLE	Constraint Violation	Constraint Violation			1	English-American
ABS_COST_FCT_VARIABLE	FSE Overtime	FSE Overtime			2	English-American

List Of Values (Data Warehouse)						
Query 1 - 7 of 7+						
Type	Language Independent Code	Display Value	Low	High	Order	
ABS_COST_FCT_AREA	Field Service	Field Service	0	9,999,999,999	1	
ABS_COST_FCT_AREA	Professional Services	Professional Services	0	9,999,999,999	2	
ABS_COST_FCT_AREA	Workforce Management	Workforce Management	0	9,999,999,999	3	
ABS_COST_FCT_TYPE	Normal	Normal	0	9,999,999,999	1	
ABS_COST_FCT_TYPE	Emergency	Emergency	0	9,999,999,999	2	
ABS_COST_FCT_VARIABLE	Constraint Violation	Constraint Violation	0	9,999,999,999	1	
ABS_COST_FCT_VARIABLE	FSE Overtime	FSE Overtime	0	9,999,999,999	2	

Figure 5. List of Values List

The top List of Values list shows values from the Siebel transactional database and the bottom List of Values (Data Warehouse) list shows the data that is to be used in ETL process. You can edit the Siebel transactional database data directly in this view, but the Siebel Data Warehouse list is read-only.

NOTE: The List of Values is extracted into the Siebel Data Warehouse where the language is the same as the ETL Default Language set in the System Preferences, or whose translate flag is set to “N,” or those that are active.

Using the Exchange Rates View

Use the Exchange Rates view to diagnose currency translation issues in the Siebel Data Warehouse. The ETL process removes duplicates, fills gaps, and removes overlaps. The ETL process computes exchange rates based on commutative and associative properties, such as product and reverse rates.

The top Exchange Rates list shows currencies, the middle Exchange Rates list shows the Siebel Data Warehouse values for active currencies and their exchange rates. The bottom Exchange Rates (Data Warehouse) list shows the values loaded into the Siebel Data Warehouse for the selected currency in the upper Exchange Rates list to the ETL Base Exchange Currency. The Exchange Rates (Data Warehouse) list is read-only.

- The Active Currencies predefined query restricts the list to the active currencies in the Siebel transactional database.
- The exception reports flag any exchange rates to the ETL Base Exchange Currency that have not been refined within a specified period (30 days).

Using the Cost List View

Use the Cost List view to display the cost lists from the Siebel transactional database from the point of view of the product, and as a read-only view of the values to be loaded into the Siebel Data Warehouse. The ETL process removes duplicates, overlaps, and fills gaps.

The Cost List list (top) shows products, and the Cost List Line Items list (middle) shows the cost lists associated with the selected product. The Cost Lists (Data Warehouse) list (bottom) shows the data as it is transformed for the Siebel Data Warehouse.

- The exception reports flag products that do not appear in the Cost List list or have Cost List time gaps and overlaps.
- The Siebel Data Warehouse contains only one Cost List for a product and a currency at a time.

Using the ETL History View

After all of the exceptions are corrected, the building of the data warehouse can be initiated. This view lists the history of the ETL processes and their statuses. When each ETL batch starts, the name of the process along with the timestamp is set, and the status is set to STARTED. When the batch completes, its status is updated to COMPLETED.

Additional Exceptions

The above mentioned exceptions are not an exhaustive list of all possible exceptions. Other exceptions are:

- The Analysis start and end date in the System Preferences (Application Administration > System Preferences) must span the entire period of time during which the transactions have occurred. For example, you may want to choose an early and late date range to cover the entire time period you are analyzing. These dates in System Preferences are crucial for the building of Day Dimension, flattening of Exchange Rates, Cost Lists, and KPI (Key Performance Indicator fact) calculations.
- The System Preferences — ETL Date Format, ETL Analysis Start, ETL Analysis End parameters, and the List of Values — ETL_UNSPEC_DATE must be defined in the same data format. If one is changed, the others must be changed accordingly.
- List of Values must be defined appropriately. If there is no appropriate entry in List of Values, the strings that depend on List of Values in the Siebel transactional database will not be translated.
- There must be exchange rates defined for the currencies your organization deals with. If the appropriate exchange values are not found, the ETL process uses the ETL Unknown Exchange Rate defined in the System Preferences.

Setting System Preferences and Using Exception Reports

Using the Exception Report and Diagnostic Views

This chapter discusses administrative tasks and troubleshooting procedures for Siebel Data Warehouse. It provides information on:

- [“Populating the Initial Siebel Data Warehouse” on page 97](#)
- [“Administering the Informatica Repository” on page 101](#)
- [“Modifying Workflow Processes for Industry Applications” on page 109](#)
- [“Optional Customization Procedures” on page 111](#)
- [“Importing Syndicated Data Into the Siebel Data Warehouse” on page 116](#)
- [“Informatica Metadata Reporter \(IMR\)” on page 124](#)
- [“Siebel Data Warehouse for Life Sciences Data Considerations” on page 125](#)
- [“Troubleshooting Siebel Data Warehouse” on page 130](#)

Populating the Initial Siebel Data Warehouse

The Siebel Data Warehouse Server populates the Siebel Data Warehouse using prebuilt ETL (Extract, Transform, Load) processes residing in the Siebel _DW Rep. The source database is the Siebel transactional database (OLTP). To populate the Siebel Data Warehouse, you can do a full load or a refresh load.

A full load completely populates the Siebel Data Warehouse. You normally do a full load once upon installing Siebel Data Warehouse, and after subsequent customizations of the star schemas (read [“Performing the ETL Process” on page 102](#)).

Typically you do a refresh load on a regular basis, such as once a week or once a month, depending upon your business needs (read [“To do a refresh load” on page 108](#)).

Siebel Data Warehouse has workflow processes predefined in the Workflow Manager.

Full Load Optimizer Settings in Oracle

[Table 20 on page 98](#) lists and provides a description of the full load workflow processes.

NOTE: When doing full loads with Oracle Data Warehouse only, the optimizer rule should be set to Rule based in the init.ora parameters (OPTIMIZER_MODE RULE).

Table 20. Predefined Full Load Workflow Processes

Workflow Name	Description
Exception_Reports	<p>This produces an exception report, which checks for data integrity of the Siebel Data Warehouse. This should be run before running Full_Load_Siebel_DW or Refresh_Siebel_DW. The results of the exception report can be used to make necessary corrections to the Siebel transactional database.</p> <p>When this workflow process completes, you can view the results in the Siebel Data Warehouse' Analytics Administration view. For more information, see “Using the Exception Report and Diagnostic Views” on page 87.</p>
Full_Extract_Siebel_DW_Horizontal	<p>Truncates the Image tables (S_ETL_I_IMAGE and S_ETL_R_IMAGE) and the S_ETL_RUN table on the Siebel transactional database, and the General and System tables (W_PARAM_G, W_COSTLST_G, W_LST_OF_VAL_G, W_EXCH_RATE_G, W_DIM_TABLES_G, W_DUAL_G, W_ETL_RUN_S, and so on) in the Siebel Data Warehouse. It extracts all the horizontal data from the Siebel transactional database. It also truncates and loads Day Dimension (W_DAY_D) and List of Values Dimension (W_LOV_D).</p>

Table 20. Predefined Full Load Workflow Processes

Workflow Name	Description
Full_Extract_Siebel_DW_Vertical	Truncates the Image tables (S_ETL_I_IMAGE and S_ETL_R_IMAGE) and the S_ETL_RUN table on the Siebel transactional database, and the General and System tables (W_PARAM_G, W_COSTLST_G, W_LST_OF_VAL_G, W_EXCH_RATE_G, W_DIM_TABLES_G, W_DUAL_G, W_ETL_RUN_S, and so on) in the Siebel Data Warehouse. It extracts all the vertical data from the Siebel transactional database. It also truncates and loads Day Dimension (W_DAY_D) and List of Values Dimension (W_LOV_D).
Full_Load_Siebel_DW_Dimensions	Truncates the dimensions and slowly changing dimensions and loads all the data extracted by Full_Extract_Siebel_DW for the Dimensions.
Full_Load_Siebel_DW_Facts	Truncates the facts, hierarchy tables and helper tables in the Siebel Data Warehouse. It loads all the data extracted by Full_Extract_Siebel_DW for the Facts. It also updates those fields in the Dimension tables that need to be calculated from the Facts and also loads PriceList Slowly Changing Dimension besides loading Hierarchy and Helper tables.
Full_Load_Siebel_DW_SCD	Loads into the Slowly Changing Dimension Table when the following attributes in the Dimension change: Person — Marital status Household — Net worth (Wealth amount) Product — Product Name
Load_Aggregates	Truncates the Sub-Dimensions and the Aggregate tables and loads the aggregate Data.
Load_Pipeline	Loads into Pipeline Fact the snapshot of the Opportunity Header rows in Revenue Fact. All open opportunities and opportunities closed in the current quarter form the snapshot. This should be typically run once a week.
Visibility_Initial_Load	Truncates the visibility tables and load the Visibility information into the Visibility Tables.

Refresh Optimizer Settings in Oracle

Table 21 lists and provides a description of the refresh workflow processes.

Table 21. Predefined Refresh Workflow Processes

Workflow Name	Description
Exception_Reports	<p>This produces an exception report, which checks for data integrity of the Siebel Data Warehouse. This should be run before running Full_Load_Siebel_DW or Refresh_Siebel_DW. The results of the exception report can be used to make necessary corrections to the Siebel transactional database.</p> <p>When this workflow process completes, you can view the results in the Siebel Data Warehouse Analytics Administration view. For more information, see “Using the Exception Report and Diagnostic Views” on page 87.</p>
Refresh_Extract_Siebel_DW_Horizontal	Contains all horizontal processes.
Refresh_Extract_Siebel_DW_Vertical	Contains all vertical enhanced processes.
Refresh_Load_Siebel_DW_Dimensions	Incrementally extracts from the Siebel Transactional Database changes to the source data since the most recent workflow executed. However, the General tables (W_PARAM_G, W_COSTLST_G, W_LST_OF_VAL_G, W_EXCH_RATE_G) and Day Dimension (W_DAY_D, W_TIME_DAY_D, W_MONTH_D, W_QTR_D) are not reloaded or updated.
Refresh_Load_Siebel_DW_Facts	All the Facts are incrementally loaded and updated. The Hierarchy and Position Helper tables are truncated and reloaded. It also updates those fields in the Dimension tables that need to be calculated from the Facts and also refreshes Price List Slowly Changing Dimension.
Refresh_Load_Siebel_SCD	<p>Loads into the Slowly Changing Dimension Table when the following attributes change in the Dimension:</p> <ul style="list-style-type: none"> ■ Person — Marital status ■ Household — Net worth (Wealth amount) ■ Product — Product Name

Table 21. Predefined Refresh Workflow Processes

Workflow Name	Description
Load_Aggregates	Truncates the Sub-Dimensions and the Aggregate tables and loads the aggregate Data.
Load_Pipeline	Loads into Pipeline Fact the snapshot of the Opportunity Header rows in Revenue Fact. All open opportunities and opportunities closed in the current quarter form the snapshot. This should be typically run once a week.
Visibility_Refresh	Refreshes the visibility information. Please choose to run this when deemed necessary.

For further information on the population process, including error recovery, see the documentation from Informatica, specifically, the Designer guide, session and server guide, and troubleshooting guide.

Administering the Informatica Repository

The Siebel Data Warehouse provides an administrative user account (Administrator) for the installation, setup, and maintenance of the Informatica repository. The Administrator account is authorized to perform customizations on the Siebel Data Warehouse and can add, change, and delete all objects within the repository.

Additionally, there is an operational user account (Operator) that has the authorization to execute the various ETL workflows and read-only access to all objects in the Siebel_DW_Rep repository.

Performing a Full Load of the Siebel Data Warehouse

The steps for populating the Siebel Data Warehouse are described here.

- [“Performing the ETL Process” on page 102](#)
- [“Troubleshooting the ETL Process” on page 105](#)

Performing the ETL Process

The ETL process extracts the transactional data, transforms it, and loads it into the analytical data warehouse.

To start the ETL process

- 1 Make sure that there is no data in the Siebel transactional database table S_ETL_INC_STAT.

NOTE: Once you have started the full or *incremental* ETL process, do not truncate the data. In case of failure, use the Restart Sessions within the workflows from the point where the failure occurred. If you cannot restart for any reason and should start from the beginning, truncate the data. See “[Troubleshooting the ETL Process](#)” on page 105.

- 2 If the language of the Siebel transactional database is not ENU, change the language value using the Siebel application’s Application Administration screen.
 - a In the Siebel application, navigate to Application Administration > System Preferences.
 - b Perform a query for ETL Default Language.
 - c Change the value to the language code of the OLTP system.

NOTE: If you try to restart a workflow session from a certain Restart position after it has failed, the workflow name will continue to be shown as failed, even though it has completed successfully.

To do a full load

- 1 Make sure Informatica service is running.
- 2 Make sure that no clients are accessing reports.
- 3 Run the Informatica Workflow Manager and connect to the repository using the Administrator account.
- 4 Open the Siebel_DW_Rep folder.

- 5** (Optional, but recommended.) Right-click the workflow named Exception_Reports and start it. When it completes, view the results in the Siebel Analytics' Analytics Administration view. For more information, see [“Using the Exception Report and Diagnostic Views” on page 87](#).
- 6** Right-click the workflow named Full_Extract_Siebel_DW and select Start.

Wait until you see a message display on the output window, then wait one or two more minutes before continuing to next step. The displayed message “Request to start workflow is unsuccessful in the message window” is normal behavior.
- 7** Repeat [Step 8](#) through [Step 10](#) for each of the following workflows.
 - Full_Load_Siebel_DW_Dimensions
 - Full_Load_Siebel_DW_Facts
 - Full_Load_Siebel_DW_SCD (Optional if you want to track the Dimensions described in [Step 9](#) by the attributes)
 - Load_Aggregates
 - Load_Pipeline
 - Visibility_Initial_load (Optional, if you want data level security)
- 8** Right-click the workflow and start it.
- 9** Monitor the load process. For information on monitoring, see Informatica's *administrator guide*.
- 10** If the load process fails, stop it by right-clicking the workflow name and choosing Stop. Check the log and fix the problem.
- 11** Find the last entry of RestartNextWorkflow # before the failed session, and restart the workflow process from that point. Continue monitoring the load process.

To monitor the ETL process

- 1** Click the Poll sessions icon to monitor the process.

Watch the monitor window and wait until it completes the last session, which is Extract_Completed, before continuing to the next step.

- 2** In the monitor window, click on the Completed Time column.

Click the Poll sessions icon again so that the triangle is pointing down. This method allows you to see the latest completed sessions at the top of the list.

Poll Sessions auto-refresh the monitoring tool and the monitor window approximately every 30 seconds.

- 3** When Full_Extract_Siebel_DW workflow is finished, click Stop Polling icon to stop monitoring the sessions.
- 4** Right-click the workflow named Full_Load_Siebel_DW_Dimensions and select start. While you wait for it to communicate to the server and fetch data, go to the next step to see when it will finish fetching data.

NOTE: The workflow is started even though the status message is “Request to start workflow is unsuccessful.”

To check the status of the request to start the workflow

- 1** Verify that the loading process has started by opening Repository Manager and connect to the repository as Administrator.
- 2** In Repository Manager, select Edit > Show Locks.

- 3 In Object Locks window, click the Refresh button about every half minute to see the change in Object Name field.

The Lock Type field should be Fetch.

Repeat clicking Refresh until you see Execute in the Type field.

When the Lock Type field shows Fetch, the sessions are loaded into memory. When the type changes to Execute, it means the process of loading sessions definition into memory is finished.

Continue to the next step and do Polling Sessions in Workflow Manager.

- 4 Go back to Workflow Manager. Click the Polling sessions icon or click Server Request menu and select Start Polling.

Polling status will appear in the monitor window panel.

- 5 Continue through the workflows in [Table 20 on page 98](#) until the Siebel Data Warehouse is created.

Troubleshooting the ETL Process

There are many variables involved in optimizing ETL performance. In addition to reading this section, you should also see Technical Note 406, located on SupportWeb.

To troubleshoot ETL

- 1 If the load process fails, stop it by right-clicking the workflow name that is executing (for example, Refresh DataMart), and choosing Stop.
- 2 Check the log in \PowerMart Server\SessLogs. You should see the error in the log file.
- 3 If you receive the Workflow Manager error message, The system cannot find the file specified, the session log files have not been set up properly.

You may need to change the text editor.

- 4 If the log does not show enough information to solve the problem, check the Event Viewer by going to Start > Control Panel > Administrative Tools > Event Viewer.

- 5 Click on Application Log and look at the most current messages.
- 6 Restart the workflow process after fixing problems.
- 7 After fixing the problem, find the last entry of RestartNextWorkflow # before the failed session, and restart the workflow process from that point. Continue monitoring the load process.

The process should start from the point it was stopped.

Deadlock or Timeout While Running ETL (DB2)

In DB2, a heavy read/write load on the OLTP database (Siebel transactional database) can cause deadlock or timeout problems in the ETL process. You can work around this problem by changing the registry settings on the Informatica server machine (Data Warehouse Server) so that Informatica can perform a dirty read.

To change Data Warehouse Server registry settings in Windows

- 1 Run regedt32.
- 2 Go to the following path:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\  
PowerMart\Parameters\Configuration
```
- 3 Click on Edit and select New String Value. Add Value as DB2Isolation.
- 4 Set the value for DB2Isolation to 1.

To change Data Warehouse Server registry settings in UNIX

- 1 Open pmserver.cfg.
- 2 Add DB2Isolation = 1.
- 3 Save and close pmserver.cfg.

NOTE: It is important that this change be evaluated carefully. Even if you roll back an OLTP workflow load process, the data may be loaded by the ETL process into the Siebel Data Warehouse. It is better to minimize OLTP load processes when ETL is in progress.

Verifying Successful Loading of the Siebel Data Warehouse

To verify that Siebel Data Warehouse has loaded

- 1 Look through the Monitor in the Workflow Manager as to whether the following Session `SIL_CopyUpdatedRunTableToOLTP1` has been successfully completed.

The monitor should show that it is completed.

- 2 In the Siebel application, navigate to Data Warehouse Administration > ETL Run.
 - If the ETL process completed successfully, the final record in the applet shows the status Completed.
 - If the ETL process did not complete successfully, the final record in the applet shows the status Running.
- 3 The status should be “Completed.” Use this SQL command to get more info:
`select * from W_ETL_RUN_S.`
- 4 Query the OLTP table `S_ETL_RUN` and check the status. Select `status_cd` from `S_ETL_RUN`. If the status is Completed, then the Data Warehouse has been successfully completed.

The status should be Completed. Use this SQL command to get more info: `select * from S_ETL_RUN.`

Disabling Dimension, Fact, and SCD Workflows

When the extract process finishes successfully, disable the following workflows:

- `Full_Load_Siebel_DW_Dimensions`
- `Full_Load_Siebel_DW_Facts`
- `Full_Load_Siebel_DW_SCD`

To disable the workflows after performing an extraction

- 1 Right-click the workflow and choose Edit.

- 2 Clear the Enabled box to make sure that you do not run the workflow by accident.

NOTE: If you want to run the full extract again, you must select the Enabled box for this workflow.

Performing a Refresh Load of the Siebel Data Warehouse

Once the full extract and load has completed, you can do a refresh load. This saves time because only the General tables and the Hierarchy tables are truncated and reloaded. The Refresh load extracts only data modified or created after the previous extract from the Siebel transactional database.

NOTE: Make sure all your mobile users have synchronized their data before running a load. If they have not synchronized, the load will not contain their data. Any data synchronized late will be captured in later loads.

Incremental Load Optimizer Settings in Oracle

This section describes how to perform a refresh ETL load for Oracle.

NOTE: When doing incremental loads with Oracle Data Warehouse only, the optimizer rule should be switched to Cost based in the init.ora parameters after analyzing all the data warehouse W_* tables (that is, OPTIMIZER_MODE ALL_ROWS.).

To do a refresh load

- 1 Make sure the Informatica service is up and running.
- 2 Make sure that no clients are accessing reports.
- 3 Run the Informatica Workflow Manager and connect to the repository using the Administrator account.
- 4 Open the Siebel_DW_Rep folder.

- 5 (Optional, but recommended.) Right-click the workflow named Exception_Reports and start it. When it completes, view the results in the Siebel Analytics' Analytics Administration view. For more information, see [“Using the Exception Report and Diagnostic Views” on page 87](#).
- 6 Repeat Steps 7–10 for each of the following workflows.
 - Refresh_Load_Siebel_DW_Dimensions
 - Refresh_Load_Siebel_DW_Facts
 - Refresh_Load_Siebel_SCD (Optional, if you want to track the Dimensions described in [Table 21 on page 100](#) by the attributes)
 - Load_Aggregates
 - Load_Pipeline (Optional, but running this once a week is recommended)
 - Visibility_Refresh (Optional, if you want data level security to be refreshed)
- 7 Right-click the workflow and start it.
- 8 Monitor the load process. For information on monitoring, see Informatica's *administrator guide*.
- 9 If the load process fails, stop it by right-clicking the workflow name and choosing Stop. Check the log and fix the problem.
- 10 Find the last entry of RestartNextWorkflow # before the failed session, and restart the workflow process from that point. Continue monitoring the load process.

Using the Informatica Workflow Manager, you can schedule the refresh loads to occur at specific intervals, such as daily, weekly, monthly, or any desired time period.

Modifying Workflow Processes for Industry Applications

If you are using one of the following industry applications, you should modify the workflow processes to optimize the mappings for your industry.

- Automotive

- Communications
- Consumer Sector
- Energy
- Life Sciences
- Media

If you do not modify the workflow processes, then every session in the workflow is processed. For example, if you use the Life Sciences application, you do not need the Automotive sessions contained within the workflow processes. You can safely remove all Automotive sessions. Leaving the sessions in the workflow process does not prevent the workflow from completing successfully, but it does take extra time to process. For optimum performance, it is recommended that you remove all sessions that do not apply to your industry.

The session names have a naming convention. Some session names are preceded by a prefix and an underscore (_). Sessions that have no prefixes and sessions that begin with the SIA prefix are common to all industry applications and should be kept (example: SIA_SIL_AssetDimension). Sessions that are specific to an industry have a two-letter prefix that indicates the type of industry (example: LS_SIL_ProdRankDimension, where LS indicates Life Sciences). [Table 22](#) has a listing of industries and sessions.

Table 22. Industry and Applicable Session Prefixes

Industry	Prefixes				
	None	SIA	AT	CS	LS
Automotive	X	X	X		
Communication	X	X			
Consumer Sector	X	X		X	
Energy	X	X			
Life Science	X	X			X
Media	X	X			

To remove sessions from a workflow process

- 1** Start Informatica PowerMart Workflow Manager.
- 2** Select the Siebel_DW_Rep repository.
- 3** Edit the following workflow processes, removing sessions that do not apply to your industry.
 - Full_Extract_Siebel_DW_Vertical
 - Full_Extract_Siebel_DW_Fact
 - Full_Load_Siebel_DW_Dimension
 - Full_Load_Siebel_DW_Fact
 - Refresh_Siebel_DW_Dimension
 - Refresh_Siebel_DW_Fact
- 4** Save the repository.

Optional Customization Procedures

This section contains optional procedures that you can use to customize your implementation of Siebel Analytics. For more information about customizing the Siebel Data Warehouse, see Technical Note 420, located on SupportWeb.

- [“Improving Performance of Full_Load_Siebel_DW”](#)
- [“Linking Workflows” on page 114](#)

Improving Performance of Full_Load_Siebel_DW

To improve the performance for the Full_Load, drop and recreate the query indexes. The query indexes that are used for analysis purposes can be dropped and recreated before and after the full load workflow.

To drop the indexes before running the full load, use ODBCSQL utility and the file drop_query_indexes.sql found in the dwrep folder to drop the indexes. Usage:

```
c:\sea700\dwdb\bin\odbcsql /s [ODBCName] /u [TableOwnerName] /p
[TableOwnerPassword] /l [LogFileName] /a /c "--"
c:\sea700\dwdb\dwrep\drop_query_indexes.sql
```

where ODBCName is the ODBC Entry created for the Siebel Data Warehouse. Use the Siebel-provided ODBC drivers or native ODBC database drivers.

Table 23 lists the flags used in the odbcsql command.

Table 23. odbcsql Flag Explanations

Flag	Description
/a	Turn on ODBC auto-commit for session
/c	Specify string which begins a comment (at BOL)
/l	Specify file to write error and status to
/p	Specify user password to login to database
/s	Specify ODBC source to use for database
/u	Specify user name to login to database

To recreate indexes after completing the Full Load, use the ddlimp utility found in the \dwdb\bin folder.

The usage of ddlimp is shown in the following example:

```
c:\sea700\dwdb\bin\ddlmp /u [TableOwnerName] /p
[TableOwnerPassword] /c [ODBCName] /G SSE_ROLE /f
c:\sea700\dwdb\bin\dwrep\ddlsmc.ct1 /b [TableSpaceName] /x
[IndexSpaceName]
```

where ODBCName is the ODBC Entry created for the Siebel Data Warehouse. Use the Siebel-provided ODBC drivers or native ODBC database drivers.

Table 24 lists the flags used in the ddlimp command.

Table 24. ddlimp Flag Explanations

Flag	Description	Comment
/U	Username	Required
/P	Password	Required
/C	ODBC Data Source	Default Env Variable: SIEBEL_DATA_SOURCE
/F	DDL Filename	
/I	Create and Merge Indexes	Default: Y
/G	Grantee for Tables	
/B	Default Tablespace	
/X	Default Indexspace	
/K	16K Page Tablespace	
/V	32K Page Tablespace	
/Q	SQL Filename	
/L	Log Filename	Default: ddlimp.log
/W	UTF8 Database	Default: N
/Z	UCS2 Database	Default: N

This utility creates the indexes in a single tablespace as specified above.

NOTE: In addition to reading this section, you should also see Technical Note 406, located on SupportWeb.

Linking Workflows

You may require running consecutive workflows from the Siebel_DW_REP folder and the Custom_Folder. For example, you may customize your Data Warehouse and wish to link a workflow in the custom folder (in the Siebel_DW_Rep repository) to one of the standard workflows. The Informatica Session Manager does not allow you to schedule sessions from two different folders. Therefore, to start the customization workflow, which is defined in your custom folder, upon completion of a standard workflow, such as Full_Load_Siebel_DW, you must use Informatica's pmcmd utility. You may also link the Full_Extract_Siebel_DW and the Full_Load_Siebel_DW workflows to load your initial Siebel Data Warehouse.

Linking Example

If the following command is entered on the Post Session Commands and Email On Success of the last session, it executes a workflow named Custom_Workflow in the Custom folder.

```
"$PMRootDir\bin\PMCMD" start %INFA_USER %INFA_PASSWORD 4001  
Custom:Custom_WORKFLOW 0 0
```

- The environment variables %INFA_USER and %INFA_PASSWORD hold the Informatica user name and password.
- 4001 is the port number. If your Informatica Server listens on a different port then use the appropriate port.
- Custom:Custom_WORKFLOW is the name of the Custom_WORKFLOW in the Custom folder.
- The first 0 means it is a workflow and the second is for the nowait option.
- You can also use the command PMCMD startworkflow. In this case you need to put a trailing percentage after each environment variable.

```
"$PMRootDir\bin\PMCMD" startworkflow %INFA_USER% %INFA_PASSWORD%  
4001 Custom:Custom_WORKFLOW 0 0
```

For detailed information on how to use pmcmd, see the Informatica documentation.

Environment Variables

You must set up environment variables to start a session or workflow. Environment variables are strings that contain information such as account name, drive, path, or file name. Environment variables control the behavior of various programs. In the case of linking workflows, use an environment variable to control the behavior of Informatica.

Account passwords must be encrypted when used in environment variables. Informatica provides the `pmpasswd` utility to encrypt them. For example, if the account password is Administrator, you would issue this command:

```
pmpasswd Administrator
```

The `pmpasswd` utility responds with:

```
Informatica PowerMart Password Encryption Utility  
Encrypted string -->]T288<ibjbpoq9okq<--
```

The text between the “-->” and the “<--” symbols is the encrypted password. If the encrypted text includes a special character, such as the “<” in this example, then use quotation marks around the text when creating the environment variable. For example, in AIX or Solaris you would use this command:

```
export PMPASS="]T288<ibjbpoq9okq"
```

where PMPASS is the name of the environment variable you are creating. On Windows, use the Control Panel to define the environment variable (Start > Settings > Control Panel > System > Environment).

Create one environment variable for the account name and password in a command. For example, if the account name for your repository is Administrator, and the account password is also Administrator, you would create an environment variable for each, like this (for AIX and Solaris):

```
export PMUSER=Administrator  
export PMPASS="]T288<ibjbpoq9okq"
```

When using `pmcmd`, you specify a command, the environment variable for the account name, the environment variable for the password, and any other parameters the command requires. All environment variables must be preceded by a percent symbol (%) to signify to `pmcmd` that the value that follows is an environment variable. For example, the `ping` command requires the account name, password, and a machine identifier, like this:

```
pmcmd ping %PMUSER %PMPASS columbo:8159
```

The `pmcmd` utility responds with:

```
pmcmd is starting.  
Connecting to pmsserver at ...  
[Transport: TCP/IP, Address: 10.1.21.23, Port: 8159]  
pmcmd exiting with successful value for ping
```

Importing Syndicated Data Into the Siebel Data Warehouse

This section covers how to import syndicated data into the Siebel Life Sciences database.

Pharmaceutical companies purchase weekly and monthly sales and prescription data, known as syndicated data, from third-party vendors such as IMS, NDC, and Cegedim. Syndicated data is read-only data about certain measures that is used for sales force analysis reporting and customer targeting. Once delivered, this syndicated data must be loaded into the Siebel ePharma Analytics database in a timely fashion and made available to users in order for them to make use of sales force analysis reporting.

The options for loading syndicated data into the Siebel Data Warehouse include the following:

- Loading from the Siebel operational application transactional database (OLTP) S_SYND_DATA table

Syndicated data can be loaded from the S_SYND_DATA table into the Siebel Data Warehouse. Existing syndicated data from the Siebel application OLTP database, stored in the S_SYND_DATA table, is extracted, transformed, and loaded by prebuilt routines and populated into the W_SYND_DATA_F and W_SYND_MKT_F Fact tables in the Siebel Data Warehouse. These tables provide information to the Rx Sales subject areas and prebuilt Rx Sales dashboards. (For more information, see the section on Importing, Extracting, and Routing Syndicated Data in *Siebel Life Sciences Guide*.)

Siebel ePharma Analytics supports multiple data types and period types. Therefore, in order to correctly use the ETL process, S_SYND_DATA must be loaded in a special way to make sure support for all data types and correct population of the Siebel Data Warehouse (see [“Analytics Data Loading Matrix for Syndicated Data”](#) on page 119).

- Loading from a flat file source using syndicated data staging tables

Syndicated data source files can be loaded directly into Siebel Data Warehouse staging tables. In the staging tables, Siebel foreign keys are matched with external sources keys for joining the external source keys with Siebel Analytics keys.

The Data Loading Matrix ([“Analytics Data Loading Matrix for Syndicated Data” on page 119](#)) illustrates the correct loading of S_SYND_DATA data into the Siebel Data Warehouse. The following data types are supported:

- Monthly Rx data by Contact
- Monthly indirect sales data by Brick
- Monthly indirect sales by Account
- Monthly indirect sales by ZIP Code
- Monthly direct sales by Account
- Monthly direct sales by Brick
- Monthly direct sales by ZIP Code
- Weekly Rx data by Contact
- Monthly plan level Rx Data
- Monthly sales market—incentives by ZIP Code
- Monthly sales market—modified by ZIP Code
- Monthly plan level physician Rx Data
- Monthly Rx data by ZIP Code
- Monthly Rx data by Brick

To make sure the data is correctly loaded in the Siebel Data Warehouse, the Siebel source table, S_SYND_DATA needs to be populated correctly, based on [Table 25 on page 119](#) and [Table 26 on page 123](#).

Analytics Data Loading Matrix for Syndicated Data

The Data Loading Matrix, shown in [Table 25](#), and the Attribute by Data Source Matrix, shown in [Table 26 on page 123](#), are provided to facilitate loading sales and Rx data. The following list explains the table headings:

- **Screen.** Name of the Siebel Analytics screen.
- **View.** Name of the Siebel Analytics view.
- **Data Source.** Value that determines which view displays the data stored in the record. The valid values are RXPrf, SlsIndBrk, SlsIndAct, SlsIndZip, SlsDirAct, SlsDirBrk, SlsDirZip, RXEVM, RXPT, RXSMI, RXSMM, RXXPT, RXZip, and RXBrk.
- **Mandatory Id.** Value that indicates the ID field that must be non-NULL for a database record to be displayed in the corresponding view. There are four key ID fields: Account Id, Contact Id, Territory Id, and Zip Id. For each view listed in the table, one of these ID fields is required and the other three must be NULL.
- **Plan Type.** Value that indicates the type of plan ID a database record must have to be displayed in the view.

Table 25. Data Loading Matrix

Screen	View	Dashboard	Page	Source OLAP table	OLTP Data Source from S_SYND_DATA to populate Source Star	S_SYND_DATA Mandatory ID	Plan Type
Rx Sales Analytics	Sales Analytics	Pharma Sales	Market Share	W_SYND_DATA_F W_SYND_MKT_F	RxPrf	Contact ID	TOTAL
Rx Sales Analytics	Sales Analytics	Pharma Sales	Product Growth	W_SYND_DATA_F W_SYND_MKT_F	RxPrf	Contact ID	TOTAL
Rx Sales Analytics	Sales Analytics	Pharma Sales	Sales Force Index	W_SYND_DATA_F W_SYND_MKT_F	RxPrf	Contact ID	TOTAL
Rx Sales Analytics	Sales Analytics	Pharma Sales	Market Share (Brick)	W_SYND_DATA_F W_SYND_MKT_F	SlsIndBrk	Area ID	TOTAL

Administering and Troubleshooting the Siebel Data Warehouse

Importing Syndicated Data Into the Siebel Data Warehouse

Table 25. Data Loading Matrix

Screen	View	Dashboard	Page	Source OLAP table	OLTP Data Source from S_SYND_DATA to populate Source Star	S_SYND_DATA Mandatory ID	Plan Type
Rx Sales Analytics	Sales Analytics	Pharma Sales	Product Growth (Brick)	W_SYND_DATA_F W_SYND_MKT_F	SlsIndBrk	Area ID	TOTAL
Rx Sales Analytics	Sales Analytics	Pharma Sales	Sales Force Index (Brick)	W_SYND_DATA_F W_SYND_MKT_F	SlsIndBrk	Area ID	TOTAL
Rx Sales Analytics	Sales Objectives Analytics	Pharma Objectives	Contact Frequency & Reach	W_OBJECTIVE_F	RxPrf (NRx, TRx Objectives)SlsIndZip (Indirect Sales Objectives)	Contact IDZip ID	TOTAL
Rx Sales Analytics	Sales Objectives Analytics	Pharma Objectives	Account Frequency & Reach	W_OBJECTIVE_F	RxPrf (NRx, TRx Objectives)SlsIndZip (Indirect Sales Objectives)	Contact IDZip ID	TOTAL
Rx Sales Analytics	Sales Objectives Analytics	Pharma Objectives	Contact Frequency & Reach (Brick)	W_OBJECTIVE_F	SlsIndBrk	Area ID	TOTAL
Rx Sales Analytics	Sales Objectives Analytics	Pharma Objectives	Account Frequency & Reach (Brick)	W_OBJECTIVE_F	SlsIndBrk	Area ID	TOTAL
Call Activity Analytics	Contact Call Analytics	Pharma Contact Call Effectiveness	Contact Effort vs. Potential	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F	RxPrf	Contact ID	TOTAL
Call Activity Analytics	Contact Call Analytics	Pharma Contact Call Effectiveness	Contact Priority & Indication	W_ACT_PROD_F	Not Applicable	Not Applicable	Not Applicable

Table 25. Data Loading Matrix

Screen	View	Dashboard	Page	Source OLAP table	OLTP Data Source from S_SYND_DATA to populate Source Star	S_SYND_DATA Mandatory ID	Plan Type
Call Activity Analytics	Contact Call Analytics	Pharma Contact Call Effectiveness	Contact Effort vs. Potential (Brick)	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F	SlsIndBrk	Area ID	TOTAL
Call Activity Analytics	Contact Call Analytics	Pharma Contact Call Effectiveness	Contact Priority & Indication (Brick)	W_ACT_PROD_F	Not Applicable	Not Applicable	Not Applicable
Call Activity Analytics	Account Call Analytics	Pharma Account Call Effectiveness	Account Effort vs. Potential	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F	SlsIndZip	Zip ID or Account ID	TOTAL
Call Activity Analytics	Account Call Analytics	Pharma Account Call Effectiveness	Account Priority & Indication	W_ACT_PROD_F	Not Applicable	Not Applicable	Not Applicable
Call Activity Analytics	Account Call Analytics	Pharma Account Call Effectiveness	Account Effort vs. Potential (Brick)	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F	SlsIndBrk	Area ID	TOTAL
Call Activity Analytics	Account Call Analytics	Pharma Account Call Effectiveness	Account Priority & Indication (Brick)	W_ACT_PROD_F	Not Applicable	Not Applicable	Not Applicable
Pharma ROI Analytics	Call Activity Profit & Loss Analytics	Pharma Call Activity Profit & Loss	Call Activity Profit & Loss	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F	RxPrf	Contact ID	TOTAL

Administering and Troubleshooting the Siebel Data Warehouse

Importing Syndicated Data Into the Siebel Data Warehouse

Table 25. Data Loading Matrix

Screen	View	Dashboard	Page	Source OLAP table	OLTP Data Source from S_SYND_DATA to populate Source Star	S_SYND_DATA Mandatory ID	Plan Type
Pharma ROI Analytics	Call Activity Profit & Loss Analytics	Pharma Call Activity Profit & Loss (Brick)	Call Activity Profit & Loss (Brick)	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F	SlsIndBrk	Area ID	TOTAL
Medical Education Analytics	MedEd Analytics	Pharma Medical Education	Event Analysis	W_MED_ED_F	Not Applicable	Not Applicable	Not Applicable
Medical Education Analytics	MedEd Analytics	Pharma Medical Education	Speaker Analysis	W_MED_ED_F	Not Applicable	Not Applicable	Not Applicable
Medical Education Analytics	MedEd Analytics	Pharma Medical Education	Budget Analysis	W_MED_ED_F	Not Applicable	Not Applicable	Not Applicable
Medical Education Analytics	MedEd Analytics	Pharma Medical Education	Event ROI	W_MED_ED_FW_SYND_DATA_F	RxPrf	Contact ID	TOTAL
Sales Rep Analytics	Sales Rep Analytics	Sales Rep Analytics	Activity	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F	RxPrf	Contact ID	TOTAL
Sales Rep Analytics	Sales Rep Analytics	Sales Rep Analytics	Sales	W_SYND_DATA_F W_SYND_MKT_F	RxPrf	Contact ID	TOTAL
Sales Rep Analytics	Sales Rep Analytics	Sales Rep Analytics	Customer	W_SYND_DATA_F W_SYND_MKT_F	RxPrf	Contact ID	TOTAL
Sales Rep Analytics	Sales Rep Analytics	Sales Rep Analytics	Objective	W_OBJECTIVE_F	RxPrf (NRx, TRx Objectives) SlsIndZip (Indirect Sales Objectives)	Contact ID Zip ID	TOTAL

Table 25. Data Loading Matrix

Screen	View	Dashboard	Page	Source OLAP table	OLTP Data Source from S_SYND_DATA to populate Source Star	S_SYND_DATA Mandatory ID	Plan Type
Pharma Executive Analytics	Sales Executive Analytics	Pharma Sales Executive Analytics	Sales Overview Page	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F W_OBJECTIVE_F W_MED_ED_F	RxPrfSlsIndZip	Contact IDZip ID	
Pharma Executive Analytics	Sales Executive Analytics	Pharma Sales Executive Analytics	Sales Overview Page (Brick)	W_ACT_PROD_F W_SYND_DATA_F W_SYND_MKT_F W_OBJECTIVE_F W_MED_ED_F	RxPrfSlsIndBrk	Contact IDArea ID	

Data Source Values for Syndicated Data Attributes

Table 26 indicates, by data source, the data values that should be loaded into the syndicated data table (S_SYND_DATA) attribute fields.

NOTE: Analytics Codes are used in the Life Sciences logical model to identify the syndicated data sources.

Table 26. S_SYND_DATA Attribute by Data Source

Data Source	Description	Analytics Codes	Attribute 1	Attribute 2	Attribute 3	Attribute 4
RXPrf	Prescription data by Contact	1	NRx	TRx	Market NRx	Market TRx
SlsIndBrk	Indirect Sales Brick Level	22	Product Sales \$	Product Sales Units	Market Sales \$	Market Sales Units
SlsIndAct	Indirect Sales Account Level	21	Product Sales \$	Product Sales Units	Market Sales \$	Market Sales Units
SlsIndZip	Indirect Sales Zip Level	23	Product Sales \$	Product Sales Units	Market Sales \$	Market Sales Units
SlsDirAct	Direct Sales Account Level	11	Product Sales \$	Product Sales Units		

Table 26. S_SYND_DATA Attribute by Data Source

Data Source	Description	Analytics Codes	Attribute 1	Attribute 2	Attribute 3	Attribute 4
SlsDirBrk	Direct Sales Brick Level	12	Product Sales \$	Product Sales Units		
SlsDirZip	Direct Sales Zip Level	13	Product Sales \$	Product Sales Units		
RXEVM	Weekly RX Data	0	Product NRx	Product TRx	Market NRx	Market TRx
RXPT	Plan Level Rx Data	6	Product NRx	Product TRx	Market NRx	Market TRx
RXSMI	Sales Market - Incentives	3	Product NRx	Product TRx	Market NRx	Market TRx
RXSMM	Sales Market - Modified	4	Product NRx	Product TRx	Market NRx	Market TRx
RXXPT	Plan Level Physician Rx Data	5	Product NRx	Product TRx	Market NRx	Market TRx
RXZip	Prescription data by ZIP Code	7	Product NRx	Product TRx	Market NRx	Market TRx
RXBrk	Prescription data by Brick	8	Product NRx	Product TRx	Market NRx	Market TRx

Informatica Metadata Reporter (IMR)

The Informatica Metadata Reporter is a Web-based application for running reports against the Siebel Data Warehouse repository (Siebel_DW_Rep). Use it to examine source tables, target tables, mappings, routines, and so on without directly accessing the Siebel_DW_Rep repository. You can create custom reports against any object in the Siebel_DW_Rep repository. For more information on the Metadata Reporter, see Informatica's *Metadata Reporter Guide*, and for a copy of this guide, see the Third-Party Documentation portal page on *Siebel Bookshelf*.

Siebel Data Warehouse for Life Sciences Data Considerations

The following issues are specific to Analytics for Life Sciences and do not affect other products.

- [“Data Loading Issues”](#)
- [“Troubleshooting the ETL Process” on page 105](#)
- [“Supported Incremental Updates in the LS Dimension Tables” on page 127](#)

Data Loading Issues

Siebel Data Warehouse for Life Sciences updates the Siebel Data Warehouse with a full refresh or using incremental updates. In Informatica, the Full_Load_Siebel_DW workflow does a complete refresh and is usually only used for the initial build. Refresh_Siebel_DW incrementally updates the Siebel Data Warehouse.

Running Full_Load_Siebel_DW deletes all existing information stored in the fact and dimension tables. The following types of incremental update rules are supported on the fact tables.

- **Activity Product Fact.** Add new records (call activity) to the fact table.
- **Rx Sales (syndicated data) Fact.** ETL does not support incremental updates. When running Full_Load_Siebel_DW, all records in the fact and dimension tables are deleted. To maintain a history in the dimension tables (such as multiple alignments), use Refresh_Siebel_DW. If you need to incrementally update the RxSales fact table for incremental syndicated data loading, use one of the following strategies:
 - **For incremental insert.** Load the data directly into staging and modify the session not to truncate the fact table. Then use the existing ETL to load it to the fact table.
 - **For incremental update.** Create a new mapping that does a lookup against the fact table and run the update.
- **Objective.** Add new records as per the new ePharma Objective. Update existing records with a changed ePharma Objective to the fact table.

- **Profile Rank.** Add new records to the fact table and update existing records in the fact table.
- **Med Ed.** Add new MedEd events to the fact table. A MedEd event is assumed to be locked in the Siebel ePharma MedEd. If the information is changed in an existing MedEd event, the ETL creates a new record in the fact table. If an existing MedEd event is changed, the ETL process does not load the data. The ETL always skips already loaded MedEd events.

Known Issues with the RxSales Fact Table

The following are known issues with creation of aggregate measure columns in the RxSales fact table.

- With large volumes of syndicated data, the creation of aggregate measures in the Siebel Data Warehouse can take four times the amount of time needed to load the fact table. This may be unacceptable under circumstances when there are large amounts of syndicated data.
- All aggregate measures have been recreated at the metadata level except for MAT. MAT can be entered as a formula for ad-hoc analysis in Siebel ePharma Answers using the function `msum(measure, window)`. For more information, see *Siebel Analytics User Guide*.
- The LS syndicated fact table contains following aggregate measure columns to speed enterprise wide reporting: TTD, TTDLY, TTDPT, MAT, YTD. To update these aggregate columns ETL process requires following steps:

Upgrading aggregate columns

- 1 Join the syndicated data to the day dimension to denormalize by time.
- 2 Create a second set of time denormalized syndicated data.
- 3 Join these two data sets to obtain appropriate measure for TTD, TTDLY, TTDPT, MAT, and YTD aggregation.
- 4 Aggregate the measures.
- 5 Update the syndicated data aggregate columns.

Supported Incremental Updates in the LS Dimension Tables

In the LS dimension tables, the following incremental updates are supported. Some dimensions have more than one set of attributes.

W_ALIGNMT_DH

Slowly Changing Dimension Type. 2

Attribute. Link between ZIP, Brick, Account, and Contact Hierarchy

Description. Tracks historical alignments.

- If ETL Alignment Version is set to N, ETL makes changes to existing alignment if there is a change on an assignment rule.
- If ETL Alignment Version is set to Y, it creates a new alignment version.

The dimension has these characteristics:

- The first alignment after Full load is 1.
- A new version is created when a new assignment rule (new position or position relationship) or an assignment criteria is modified (change in postal code, brick, contact, or account) if ETL Alignment Version is set to Y.
- Activation date changes have to be entered manually. The ETL looks for the change and creates a new version, even though the rules have not been applied to the Siebel transactional database.
- Assignment criteria:
 - Contact ZIP Code or Account ZIP Code cannot use ZIP Code ranges. Each ZIP Code assigned to a territory needs to be on a separate row, so the same value needs to be entered for both ZIP Code Low and ZIP Code High.
For example, if ZIP Code 09654 is assigned to a territory, the value for both ZIP Code High and ZIP Code Low should be 09654. Also, the same ZIP Code should not be assigned twice to the same territory and a ZIP Code should be unique to a territory when using assignment criteria for Contact ZIP Code or Account ZIP Code.
 - Contact Brick or Account Brick require unique bricks assigned to a territory.

- Every new version increases the counter by one and is a sequential number. When a dimension table gets too large, your administrator can create an SQL query to delete all attributes for version numbers.
- Effective date of the alignment is assignment activation date.

W_ORG_D

Slowly Changing Dimension Type. 3

Attributes. ACCNT_TYPE_CD, ACCNT_TYPE_CD1, ACCNT_TYPE_CD2, ACCNT_TYPE_CD3

Description. Tracks three past account types. If the account type changes a fourth time, the first change is deleted and only the past three changes are maintained. Effective date is ETL run date to each group of attributes.

Attributes. NAME, NAME1, NAME2, NAME3

Description. Tracks three past account names. If the account name changes a fourth time, the first change is deleted and only the past three changes are maintained. Effective date is ETL run date.

Attributes. NUMB_OF_BEDS, NUMB_OF_BEDS1, NUMB_OF_BEDS2, NUMB_OF_BEDS3

Description. For an account type of hospital and clinic, tracks three past quantities. If the number of beds changes a fourth time, the first change is deleted and only the past three changes are maintained. Effective date is ETL run date.

Attributes. PAR_INTEGRATION_ID, PAR_ITGR_ID1, PAR_ITGR_ID2, PAR_ITGR_ID3

Description. Tracks three past parent accounts. If the parent account changes a fourth time, the first change is deleted and only the past three changes are maintained. Effective date is ETL run date.

W_POSTN_CON_D

Slowly Changing Dimension Type. 3

Attributes. STATUS, STATUS1, STATUS2, STATUS3

Description. Tracks three past contact statuses. If the contact status changes a fourth time, the first change is deleted and only the past three changes are maintained. Effective date is ETL run date.

W_POSITION_D

Slowly Changing Dimension Type. 3

Attributes. EMP_FST_NAME, EMP_MID_NAME, EMP_LAST_NAME, EMP_FST_NAME_H1, EMP_MID_NAME_H1, EMP_LAST_NAME_H1, EMP_FST_NAME_H2, EMP_MID_NAME_H2, EMP_LAST_NAME_H2, EMP_FST_NAME_H3, EMP_MID_NAME_H3, EMP_LAST_NAME_H3

Description. Tracks three past employee names assigned to a position. If the employee name changes a fourth time, the first change is deleted and only the past three changes are maintained. Effective date is ETL run date.

W_PROD_RANK_D

Slowly Changing Dimension Type. 3

Attributes. RANKING, RANKING1, RANKING2, RANKING3

Description. Keep three previous rankings to allow restatement. Effective date is ETL run date.

Attributes. RATING, RATING1, RATING2, RATING3

Description. Keep three previous ratings to allow restatement. Effective date is ETL run date.

W_PRODUCT_D

Slowly Changing Dimension Type. 3

Attributes. VENDOR_LOC, VENDOR_LOC1, VENDOR_LOC2, VENDOR_LOC3

Description. Tracks three past vendor locations. If the vendor location changes a fourth time, the first change is deleted and only the past three changes are maintained. Effective date is ETL run date.

Troubleshooting Siebel Data Warehouse

Look up any problems, error messages, and other issues in the following topics.

- [“Installation and Initial Configuration Issues”](#)
- [“Informatica and Loading Issues” on page 131](#)

Installation and Initial Configuration Issues

Problem. Cannot connect to the Siebel Data Warehouse running on DB2.

Possible cause. Make sure that the DB2 configuration matches the requirements listed in [“IBM DB2 UDB-Specific Database Requirements” on page 32](#).

Problem. After installing Informatica’s ODBC driver (V3.5) on a Windows computer, you can not open the Query Analyzer and the Enterprise Manager shows an error message.

Probable cause. The ODBC driver installation replaces the odbcbcp.dll file with an older version. The Informatica documentation contains the procedure for correcting this problem.

Problem. Cannot connect to Siebel transactional database from Informatica.

Possible cause. Make sure that the server running the Informatica Server software has an ODBC connection to the Siebel transactional database using a Siebel ODBC driver, and an ODBC connection to the Siebel Data Warehouse using the Merant Closed 3.5 32-bit driver.

Problem. Error: ORA-12541: TNS:no listener.

Possible cause. Check the Compatibility tab in Informatica service configuration. It should be Oracle 8. If it is not set to Oracle 8, change it and restart the Informatica server.

Problem. Error 2140 (Informatica service failed to start).

Possible causes. The server may not be started or the Informatica Service may not be started. See Informatica’s *installation and configuration guide* for detailed information.

Problem. Informatica installation fails with an Unhandled Exception error and displays a message similar to this: “Error Number: 0x80040707. Description: Dll function call crashed: ISRT._DoInstall.”

Possible causes. Most likely the computer is running out of virtual memory. Restart the computer and reinstall Informatica.

Informatica and Loading Issues

Double-click the workflow to view the log file details.

Problem. Double-clicking the workflow yields a Workflow Manager error message: The system cannot find the file specified.

Probable Cause. The session log files are not set up properly. You also may need to change the text editor.

Problem. Using Oracle, some mappings hang when running when performance statistics are switched on.

Probable Cause. When running some Informatica mappings for loading the Siebel Data Warehouse, turning on the Performance Statistics can cause the mapping to hang. The only workaround is to increase the values of the LMSharedMemory and MaxSessions variables in Informatica. The risk of increasing the LMSharedMemory too much is that it may start to have a serious effect on overall performance of the machine that the Informatica server is running on.

Problem. When you execute a workflow on the Informatica Workflow Manager, you get the following error message:

Request to start workflow (workflow name) on server (server name) not successful.

Probable cause. This can happen due to a server time-out property that is usually set to 20 or 40 seconds. When you try to run a large workflow, every session in that workflow is fetched into the server's memory. If this takes longer than the server time-out property, the server returns a message that the workflow was unable to run. However, the workflow is running, but the server just needs time to complete fetching the sessions into memory. Double-click the workflow to view the log file details.

Problem. When running Full_Extract_Siebel_DW or Refresh_Extract_Siebel_DW, Informatica returns errors similar to:

```
TE_7007 Transformation Evaluation Error; current row skipped...
TE_7007 [<<Transformation Error>> [to_date]: Date function error
to_date('19010101', 'DD-MON-YYYY')
```

Probable cause. Incorrect date entry in the SME Date Format field in the System Preferences. The format is YYYYMMDD.

Problem. When running Full_Load_Siebel_DW, Informatica returns errors similar to:

```
CMN_1014 Error creating semaphore...
TM_6006 Error initializing DTM for session...
TM_6006 [s_CR18a1. Load W_PROG_DM_TMP - Program Records]
```

Probable cause. Insufficient semaphores allocated. Allocate more semaphores on the Data Warehouse Server. The change becomes effective when you reboot.

Problem. Informatica (RDBMS is DB2) gives this error message:

```
Error occurred unlocking [SDE_ServiceRequestDimension1].
An error occurred while accessing the repository[[IBM][CLI
Driver][DB2/6000] SQL0955C
Sort memory cannot be allocated to process the statement. Reason
code = "".
SQLSTATE=57011]
DB2 Fatal Error[FnName: ExecuteDirect -- SQLSTATE=57011
[IBM][CLI Driver][DB2/6000]
```

Probable cause. The DB2 parameter SHEAPTHRES is too small.

Problem. Informatica produces the error “Unable to connect to the server” when running a full load of the Siebel Data Warehouse (Full_Load_Siebel_DW_Dimensions).

Probable cause. The last Designer session was not validated. Part of the development process of working with Designer is to always validate any changes to Informatica mappings definitions and sessions after the change is saved in repository.

Problem. When loading the data warehouse, Informatica reports a lock problem.

Probable cause. Either someone has a session open or there is a dead session. Make sure no one has any open sessions. If no sessions are open, then follow the Informatica documentation on removing locks caused by dead sessions.

Problem. After changing an Informatica mapping, you may get an error message when trying to execute Full_Load_Siebel_DW_Facts. The error message is Unable to connect to the server.

Probable Cause. This is due to Informatica mapping objects that have been modified and this does not automatically validate the session objects. You must validate all changes to any existing mappings in the Informatica repository.

Problem. Session SDE_RecordLoadStart fails due to unique constraint error while executing Full_Load_Siebel_DW_Dimensions or Full_Load_Siebel_DW_Facts.

Probable Cause. This could be because the previous full load did not complete successfully. Fix the problem that caused the previous load session to fail. Make sure you start the process from last entry of Load_RestartNextWorkflow # before the failed session, and restart the workflow process from that point.

If you have to reextract the data from the Siebel transactional database because something had to be fixed in source database to resolve the load error then you must restart the ETL process. Truncate S_ETL_INC_STAT in the Siebel transactional database, then enable the Extract and Load workflows and rerun them.

Problem. Session SDEINC_RecordExtractStart fails due to unique constraint error while executing a Refresh workflow.

Probable Cause. This could be because the previous load or refresh did not complete successfully. Fix the problem that caused the previous refresh session to fail. Make sure you start the process from last entry of %RestartNextWorkflow # before the failed session, and restart the workflow process from that point.

Problem. The session fails and you receive the following error code:

```
Error "TE_7042 Aggregate Error: File Operation Error
```

Probable Cause. This is due to a disk space limitation. Check the /Informatica/PowerMart/Cache/Check directory for available disk space, also check the limits (ulimit) of the account used to start PowerMart.

Problem. Informatica sessions get deadlocked and eventually fail when they try to do a select from the repository table OPB_OBJECT_LOCKS. This problem sometimes occurs on MSSQL server databases.

Probable Cause. This is possibly caused by a limited number of resources on the MSSQL Database Server. The workaround is to execute the following MSSQL specific SQL command on the Siebel Data Warehouse:

```
DROP INDEX OPB_OBJECT_LOCKS.OPB_OBJ_LOCKS_IDX  
  
DROP INDEX OPB_OBJECT_LOCKS.OPB_OBJ_LOCKS_IDX2  
  
DROP INDEX OPB_OBJECT_LOCKS.OPB_OBJ_LOCKS_IDX3
```

Upon completion of executing these commands, proceed executing the workflow processes to load the Siebel Data Warehouse.

Problem. An error may occur when trying to send a post session email notification using MS Outlook 2000. Refer to Informatica release notes for further information.

Probable Cause. After installing Informatica Server on Windows, copy the file mapi32.dll from winnt\system32 to the bin folder where the Informatica Server is installed, overwriting the existing mapi32.dll in that directory. Start the Informatica Server so that the Informatica Server can use the new mapi32.dll.

The Extended MAPI Error. MAPILogonEx failed[2147746065] error indicates that the logon is not configured correctly. Check the following:

- 1** Under Services > Informatica > Logon, make sure the login (domain\username) and password are correct.
- 2** Under Control Panel > Mail (it may also be called Mail and Fax or Exchange) > Services > Show Profiles, make sure the mail profile is correct.
- 3** Under Programs > Informatica Server > Informatica Server Setup > Miscellaneous, make sure the MS Exchange profile is correct.

Problem. While creating a custom session, bulkload mode does not work properly with SQLServer.

Probable Cause. Change the mode to “normal” in Informatica repository for the session. The “normal” mode must be used everywhere for SQLServer in all of your custom sessions.

Problem. When running IMR, you may receive an error message box which states the following: The evaluation period for this Oracle ODBC driver has expired. Please call Merant to obtain a production version of this Oracle ODBC driver.

Probable Cause. This is caused by a down-level ODBC driver license key. Rename or move ivodbc.lic, lvodbc.lic (if it exists), and lvdw.lic (if it exists). Make sure you have only one license file named ivdw.lic in winnt\system32. This eliminates the problem.

Problem. Outlook closes when sending out a notification of finishing the ETL process.

Probable Cause. Informatica is closing Outlook. This issue is known to Informatica and is scheduled to be resolved in an upcoming release. Until then, create a second profile in Outlook and add that profile name to the Informatica server setup.

Problem. When running the following Siebel_DW_Rep jobs through pmcmd, the pmcmd returns error code of 3:

Full_Extract_Siebel_DW

Full_Load_Siebel_DW

All of the sessions complete successfully when viewing through the Informatica Server Manager.

Probable Cause. This is a non-fatal error. It occurs when the batch has more sessions than is set in the MaxSessions parameter in Informatica.

Problem. An error may occur when executing SDE_ETLDataSource when the unique constraint on the W_ETL_DATASRC_S.ROW_WID column is violated.

Probable Cause. The values for the data sources in S_ETL_DATASRC are hard-coded. The error occurs when two entries are in the S_ETL_DATASRC table, for example, one for the OLTP and one for a CSV file. In Informatica Designer, the ROW_WID column has been hard-coded to a value of 1 in the expression transformation called EXPTRANS. Because there are now two rows in S_ETL_DATASRC, the mapping will fail when it encounters the second row.

The Siebel 6.3 to 7.5 Analytics Bridges

A

If you are using a Siebel eBusiness application version 6.3 and have also licensed version 7.5 of Siebel Analytics, you will need to use the Siebel eBusiness 6.3 to 7.5 Analytics Bridge (referred to as the *Analytics Bridge* throughout this appendix). Installation of the Analytics Bridge allows you to use the newer functionality of Siebel Analytics 7.5 with a Siebel eBusiness 6.3 operational application.

An Analytics Bridge application is available for the following Siebel operational applications:

- Siebel eBusiness 6.3 (Horizontal) applications
- Siebel Life Sciences 6.3 applications
- Siebel Financial Services 6.3 applications

If you plan to use this Bridge application, you should review this appendix before you begin the installation process.

This appendix is in two sections:

- [“Installation Process” on page 138](#)
- [“Configuration Considerations” on page 153](#)

CAUTION: Because of inherent differences in the underlying application schemas, the Analytics Bridge may not perform a complete mapping of all Presentation layer columns in the Siebel Analytics repository. This may also affect those dashboard reports built from the columns that are not mapped. For a list of Presentation layer columns and reports known to be affected, see Technical Note 429, located on SupportWeb.

Installation Process

The Analytics Bridge installation process consists of configuring the Siebel Analytics application to read Bridge-specific repository files instead of the standard Analytics repositories. All of the Analytics Bridge-specific files have been shipped on a separate Bridge-specific CD-ROM and are located in the 63_Bridges folder. The files in this folder need to be installed in the appropriate Siebel Analytics directories and then manually configured. This section describes the specific steps to complete the installation process and describes what to do with the various files provided in the 63_Bridges folder.

The installation process for the Analytics Bridge consists of nine major steps:

- 1 [“Begin the Standard Installation of Siebel Analytics 7.5” on page 139](#)
- 2 [“Pause the Installation of Siebel Analytics” on page 139](#)
- 3 [“Replace the Informatica Repository File” on page 140](#)
- 4 [“Continue the Installation of Siebel Analytics” on page 141](#)
- 5 [“Replace the Siebel Analytics Repository File” on page 141](#)
- 6 [“Import New Siebel OLTP Schema Definitions” on page 143](#)
- 7 [“Apply Schema Definitions to the Physical Database” on page 147](#)
- 8 [“Import Language-Independent Siebel Seed Data” on page 149](#)
- 9 [“Localize the Siebel Analytics Bridge” on page 150](#)
(Perform this step only if you wish to view Siebel Analytics data in a non-English environment.)

NOTE: If you have already installed Siebel Analytics 7.5 and created the Informatica repository, you will need to delete the Informatica repository and continue from [Step 3](#). For instructions on deleting the Informatica repository, see [“Installing the Siebel Data Warehouse” on page 53](#).

Begin the Standard Installation of Siebel Analytics 7.5

Before you can install the Analytics Bridge, you must review Chapter 2, “Installing and Configuring the Siebel Data Warehouse,” for the process of installing the standard version of Siebel Analytics.

Begin the Bridge installation by starting the Siebel Data Warehouse Installation Wizard. The Siebel Data Warehouse installation process is shown in [Figure 3](#), “General Process Flow for Installing Siebel Data Warehouse” on page 44. Complete the installation steps up to, but not including, 2.2.1 A: Restore Informatica Repository. Before implementing step 2.2.1 A, you must pause the installation and switch to the following procedures.

Pause the Installation of Siebel Analytics

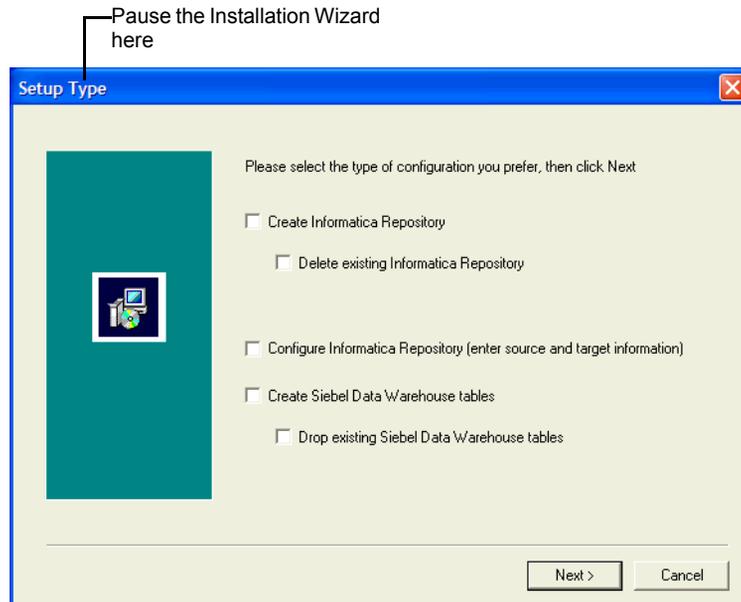
Use the following procedure to pause the Siebel Analytics installation.

To pause the Siebel Analytics installation

- 1 Using the Siebel Analytics Installation Wizard, make sure you have completed the steps in the preceding list, until you get to the Siebel Analytics–Siebel Data Warehouse Configuration Setup screen.

NOTE: See [Chapter 2, “Installing and Configuring the Siebel Data Warehouse,”](#) for more information about Steps 1 through 3.

- At this point, when the Siebel Analytics Installation Wizard displays the following Siebel Analytics–Siebel Data Warehouse Configuration Setup screen, do not click Next. Leave the Installation Wizard using Alt + Tab.



NOTE: Do not close the Installation Wizard.

- In Windows Explorer, perform the next steps.

Replace the Informatica Repository File

The Analytics Bridge product contains a dedicated Informatica repository (.rep) file that provides the Bridge ETL functionality. You must move the Informatica repository file manually into the appropriate folder location in Siebel Analytics to enable this functionality.

To replace the Informatica repository file

- 1 Import the one Informatica 6.3 Analytics Bridge repository file applicable to your particular bridge application:

6.3 Bridge Application	Copy	From	To
Horizontal	Siebel_DW_Rep_63.rep	63_Bridge\Horizontal folder	SiebelAnalytics\DW\dwrep\Informatica\Repository\
Financial Services	Siebel_DW_Rep_FINS_63.rep	63_Bridge\FINS folder	
Life Sciences	Siebel_DW_Rep_Pharma_63.rep	63_Bridge\Pharma folder	

- 2 Return to the Installation Wizard using Alt + Tab.

Continue the Installation of Siebel Analytics

Once you have replaced the standard .rep file with the Bridge-specific .rep file, resume running the remainder of the standard Siebel Analytics Installation Wizard.

- 1 Complete the remaining parts of [“Installing the Siebel Data Warehouse” on page 52](#) and all of [“Configuring the Repository Server Using the Repository Administration Console” on page 67](#).
- 2 When you are prompted to provide the name of your Informatica .rep file, use the file name you chose from the table above.

Replace the Siebel Analytics Repository File

Along with an Informatica repository (.rep) file, the Analytics Bridge product also contains a Siebel Analytics repository (.rpd) file, which provides customized metadata for the Analytics Bridge application. You must move this .rpd file manually into the appropriate folder location in the Siebel Analytics directory to enable this functionality.

To replace the Siebel Analytics repository file

- 1 Import the Siebel 6.3 Analytics Bridge-specific Siebel Analytics repository file:

Copy	From	To
SiebelAnalytics_63.rpd	63_Bridge folder	SiebelAnalytics\Repository\

- 2 Configure Siebel Analytics to point to the Bridge-specific .rpd file.

NOTE: This Bridge .rpd file is the same for all Siebel 6.3 Bridge applications.

In order for Siebel Analytics to access the 6.3 Bridge-specific repository (.rpd) file, you must change a configuration setting in the NQConfig.ini file. Initially, the Repository section of the NQConfig.ini file shows the following entry:

```
[ REPOSITORY ]
Star = siebelanalytics.rpd, DEFAULT;
```

Comment out the original Siebel Analytics repository entry and create a new entry for the 6.3 Bridge-specific .rpd file, as follows:

```
[ REPOSITORY ]
Star = siebelanalytics_63.rpd DEFAULT;
#Star = siebelanalytics.rpd, DEFAULT;
```

NOTE: The Bridge Application uses the same Siebel Analytics Web Catalog as the preconfigured Siebel Analytics 7.5 product. Therefore, no additional Web Catalog installation or configuration is necessary for the Web Catalog portion of the Siebel Analytics product.

Import New Siebel OLTP Schema Definitions

After the Bridge-specific Siebel Analytics and Informatica repositories have been installed, update the 6.3 Siebel eBusiness operational application's database (the OLTP database).

NOTE: You need to be running Siebel Tools for this part of the procedure.

To import new schema definitions into the OLTP application

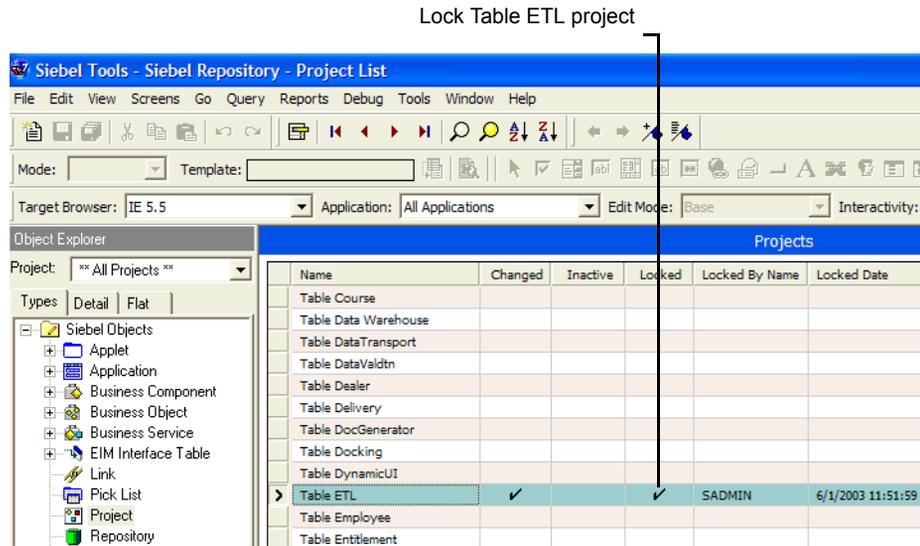
- 1 Copy the following file:

Copy	From	To
objects_63_bridge.sif	63_Bridge folder	objects_63_bridge.sif \tools\objects

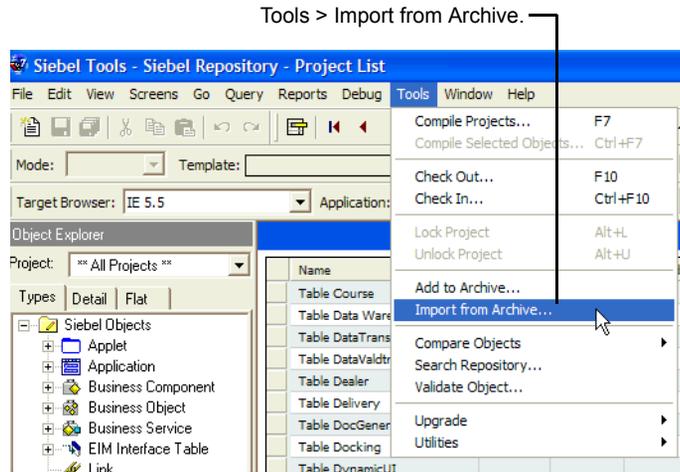
- 2 Open Siebel Tools, pointing to the development database.
- 3 In Object Explorer, click Project.

- 4 In the appropriate Projects list row, click in the Locked column to check out (lock) the project.

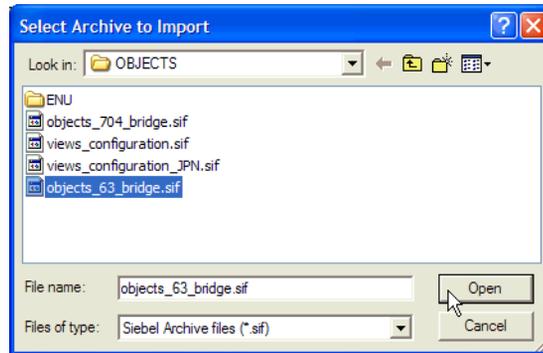
NOTE: Check the Release Notes for the actual project name.



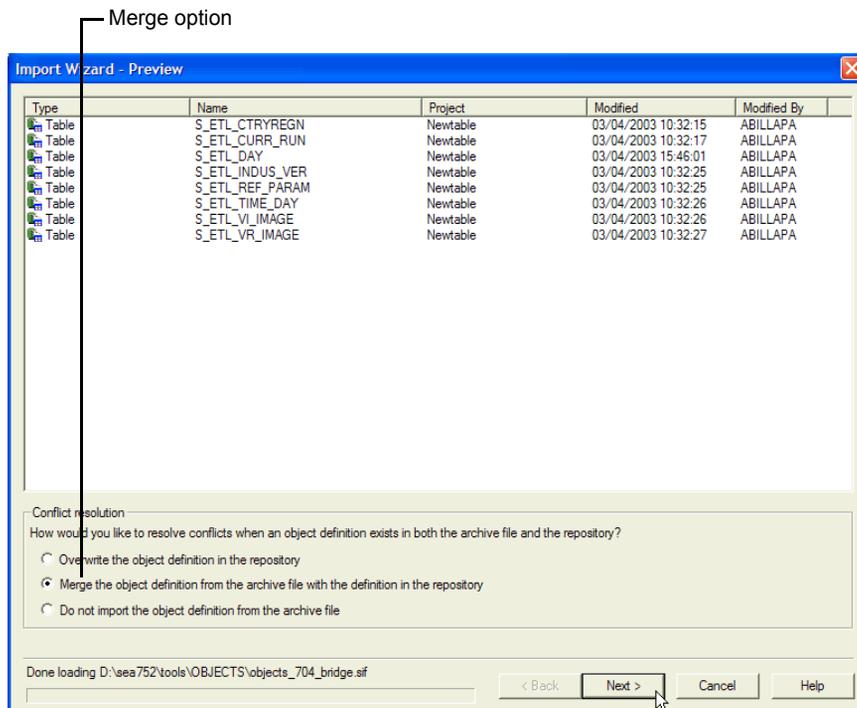
- 5 Navigate to Tools > Import from Archive.



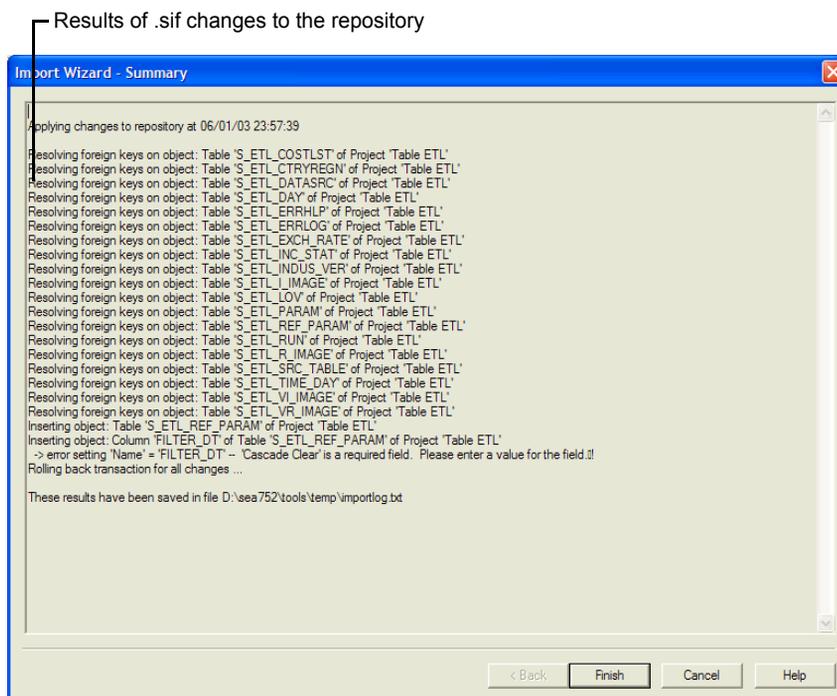
- 6 In the Select Archives to Import window, select the objects_63_bridge.sif file.



- 7 Select Open. When you open the bridge .sif in Tools, the Import Wizard—Preview screen appears, listing the Analytics Bridge tables. Be sure to select the Merge option, and then click Next.



- 8 Click Next. The Import Wizard—Summary screen appears, showing you a summary of the .sif changes to the repository files.



NOTE: All the objects imported in this process should be new to your 6.3 repository, therefore there should be no conflict due to an import. However, should there be a conflict message, choose the second Conflict Resolution option: Merge the object definition from the archive file with the definition in the Repository.

- 9 In the next screen, click Finish to complete the import process.

Apply Schema Definitions to the Physical Database

Once the new schema has been imported into Siebel Tools, you must apply it to the physical database (the OLTP).

To apply schema definitions to the physical database

- 1** In Siebel Tools, go to the Table screen. Search for S_ETL*.
You should see the following tables:
 - S_ETL_COSTLST
 - S_ETL_CTRYREGN
 - S_ETL_DATASRC
 - S_ETL_DAY
 - S_ETL_ERRHLP
 - S_ETL_ERRLOG
 - S_ETL_EXCH_RATE
 - S_ETL_I_IMAGE
 - S_ETL_INC_STAT
 - S_ETL_INDUS_VER
 - S_ETL_LOV
 - S_ETL_PARAM
 - S_ETL_RUN
 - S_ETL_R_IMAGE
 - S_ETL_REF_PARAM
 - S_ETL_SRC_TABLE
 - S_ETL_TIME_DAY
 - S_ETL_VI_IMAGE
 - S_ETL_VR_IMAGE
- 2** Select all these tables, and click Apply at the top of the screen.

- 3 In the next window (Apply Schema), under the entry Tables, select Current Query from the dropdown. Under the subsequent entries, enter the connection parameters for the development database. (Your connection information will vary depending on your particular database platform and on the configuration of your particular database environment.)
- 4 Click Apply.

Import Language-Independent Siebel Seed Data

Siebel seed data must also be installed to enable a fully functioning Bridge. This updates the seed data in the Siebel transactional database for items such as responsibility data and lists of values information.

To import language-independent seed data

- 1 Copy the following files:

Copy	From	To
seed_63_bridge.dat	63_Bridge folder	Local Machine
seed_63_bridge_< xxx >.inp (where < xxx > corresponds to the database platform being used)		

- 2 Open a command line, and go to the same directory where you copied the .dat and .inp files.
- 3 Replace each of the following connection parameters with the values appropriate to your database environment, and then run the appropriate import command from the following table.

NOTE: The command you run depends on which database platform you are using.

- Connection parameters:
 - UserName

- ❑ Password
- ❑ ODBCDataSource
- ❑ DatabaseOwner
- Import command (*one* of the following):

Database Platform	Run Import Command
DB2UDB	<pre>\$SIEBELSERVERROOT\bin\dataimp /u \$UserName /p \$Password /c "\$ODBCDataSource" /d \$DatabaseOwner /f seed_63_bridge.dat /w y /q 100 /h Log /x f /i seed_63_bridge_db2udb.inp /l seed_63_bridge_db2udb.log</pre>
MSSQL	<pre>\$SIEBELSERVERROOT\bin\dataimp /u \$UserName /p \$Password /c "\$ODBCDataSource" /d \$DatabaseOwner /f seed_63_bridge.dat /w y /q 100 /h Log /x f /i seed_63_bridge_mssql.inp /l seed_63_bridge_mssql.log</pre>
Oracle	<pre>\$SIEBELSERVERROOT\bin\dataimp /u \$UserName /p \$Password /c "\$ODBCDataSource" /d \$DatabaseOwner /f seed_63_bridge.dat /w y /q 100 /h Log /x f /i seed_63_bridge_oracle.inp /l seed_63_bridge_oracle.log</pre>

Localize the Siebel Analytics Bridge

If your organization requires that Siebel Analytics data be viewed in a language other than English, you must also add localized seed data for metadata translations. Perform this process once for each language in which your data is to be viewed.

To import Locale seed data into the Siebel OLTP database

- 1 Copy the following files:

Copy	From	To
seed_63_bridge_< lan > .dat (where < lan > corresponds to the language being used)	63_Bridge\Localization folder	Local Machine
seed_63_bridge_< lan > .inp (where < lan > corresponds to the language to be installed)		

- 2 Open a command line, and navigate to the same directory where you copied the .dat and .inp files.
- 3 Replace each of the following connection parameters with the values appropriate to your database environment, and then run the appropriate import command from the following table. Replace < lan > in the command with the appropriate code for the language to be installed.

- Connection parameters:

- UserName
- Password
- ODBCDataSource
- DatabaseOwner

- Import command:

```
$SIEBELSERVERROOT\bin\dataimp /u $UserName /p $Password /c
"$ODBCDataSource" /d $DatabaseOwner /f
seed_63_bridge_<lan>.dat /w y /q 100 /h Log /x f /i
seed_63_bridge_<lan>.inp /l seed_63_bridge_<lan>.log
```

NOTE: For the dataimp utility to work under Oracle, your local and database servers must have the same language setting. Change the database server language setting to the localized language, then try to run dataimp again.

Siebel Analytics 6.3 Bridge Files

The contents of each of the files included in the 63_Bridges folder are shown in [Table 27](#).

Table 27. Files Used by the Analytics Bridges

File Name	Purpose of File
<ul style="list-style-type: none"> ■ Siebel_DW_Rep_63.rep ■ Siebel_DW_Rep_FINS_63.rep ■ Siebel_DW_Rep_Pharma_63.rep 	<p>The Informatica repository file containing the objects and code required to populate the 7.5 Siebel Data Warehouse with the 6.3 Siebel Application data.</p> <p>This file replaces the standard .rep file provided with Siebel Analytics version 7.5.</p>
SiebelAnalytics_63.rpd	The Siebel Analytics repository file containing all of the analytical metadata mapping rules to take physical data warehouse tables and columns and map them to presentation layer metrics and facts. (This file replaces the standard .rpd file provided with Siebel Analytics version 7.5.)
objects_63_bridge.sif	The Siebel Archive File containing the logical definition of the ETL tables.
<ul style="list-style-type: none"> ■ seed_63_bridge.dat (for Siebel Cross-Industry Applications) ■ seed_63_fins_bridge.dat (for Siebel Financial Services Applications) ■ seed_63_Pharma_bridge.dat (for Siebel ePharma Applications) 	<p>The Siebel Seed Data file containing language-independent seed data records for the following tables:</p> <ul style="list-style-type: none"> ■ S_LST_OF_VAL ■ S_RESP ■ S_APP_VIEW ■ S_APP_VIEW_RESP
<p>seed_63_bridge_<db>.inp where <db> is one of:</p> <ul style="list-style-type: none"> ■ db2udb ■ mssql ■ oracle 	Import file used to control the import of the seed_63_bridge.dat file from a Siebel Cross-Industry Application to a particular database platform.

Table 27. Files Used by the Analytics Bridges

File Name	Purpose of File
seed_63_< sia >_bridge_< db > .inp where < sia > is one of: <ul style="list-style-type: none"> ■ fins ■ pharma and where < db > is one of: <ul style="list-style-type: none"> ■ db2udb ■ mssql ■ oracle 	Import file used to control the import of the seed_63_bridge.dat file from a particular Siebel Industry Application to a particular database platform.
seed_63_bridge_< lan > .dat	Set of Siebel seed data files containing translations for all the Siebel Analytics metadata objects. Each file contains all the translations for a single language. These files place translation-related seed data into the S_MSG table in the Siebel OLTP database.
seed_63_bridge_< lan > .inp	Set of import files used to control the import of the language seed files to the database.

Configuration Considerations

After installing the Analytics Bridge, replacing the applicable repositories, and loading new Siebel seed data files, you must also create Siebel Analytics users and, if applicable to your organization, configure the database tables for Siebel Delivers.

Creating Siebel Analytics Users in Siebel 6.3 eBusiness Applications

Siebel Analytics uses responsibilities defined in the Siebel operational application to control access to its data objects. (For more information on Siebel Analytics security configuration and integration with Siebel operational applications, see the chapter on user authentication in *Siebel Analytics Installation and Configuration Guide*.)

The language-independent seed data step of the Bridge installation process creates Siebel Analytics responsibilities in your organization's Siebel 6.3 eBusiness application. After the installation of these responsibilities, you must assign users in your organization to these new Siebel Analytics responsibilities using the operational application's Responsibilities module. The responsibilities assigned to a particular user control the level of access that user has within Siebel Analytics. Users not assigned to any Siebel Analytics responsibility cannot access the Siebel Analytics application.

Creating Database Tables for the Siebel Delivers Scheduler

NOTE: This step is applicable only if you are using the Siebel Delivers application.

Siebel Analytics Scheduler uses four database tables to store pertinent information about a report job, its instances and its parameters. In Siebel 7.5 eBusiness operational applications, these four tables reside within the Siebel operational (OLTP) database and are installed as part of the Siebel 7.5 operational applications installation process.

These tables do not exist in the Siebel 6.3 OLTP schema. Customers using Siebel eBusiness 6.3 operational applications who want to make use of the Siebel Delivers product must manually install the four database tables to one of their organization's databases. It is recommended that these tables be created in the same database as the database schema for the Siebel operational application. However, these tables can be created in an independent database as well. The section on creating and configuring Siebel Analytics tables in *Siebel Analytics Installation and Configuration Guide* describes the process of creating these tables.

NOTE: The table-creation process described in *Siebel Analytics Installation and Configuration Guide* must be followed by every customer who configures the Siebel Analytics 6.3 to 7.5 Bridge and who intends to use the Siebel Delivers product, even though the reference documentation states that it is only required for Siebel Analytics Stand-Alone customers.

For more information on the Siebel Delivers application, see *Siebel Analytics Scheduler Guide*.

Viewing Analytics Content

Siebel Analytics content is viewed through a Web browser, but Siebel 6.3 operational application content is viewed through the Siebel Windows client application. Therefore, if you wish to view Siebel Analytics content and Siebel 6.3 operational application at the same time, you must have two windows open on the end-user's desktop:

- The Siebel operational application client, to view operational data
- A Web browser window, to view the URL containing Siebel Analytics content

The URL for viewing Siebel Analytics content, using a standard configuration, is

```
//<machine name>/analytics
```


The Siebel 7.0.4 to 7.5 Analytics Bridges

B

If you are using a Siebel eBusiness application version 7.0.4 and have also licensed version 7.5 of Siebel Analytics, you will need to use the Siebel eBusiness 7.0.4 to 7.5 Analytics Bridge (referred to as the *Analytics Bridge* throughout this appendix). Installation of the Analytics Bridge allows you to use the newer functionality of Siebel Analytics 7.5 with a Siebel eBusiness 7.0.4 operational application.

An Analytics Bridge application is available for Siebel eBusiness (Horizontal) 7.0.4 operational applications.

If you plan to use this Bridge application, review this appendix before you begin the installation process.

This appendix is in two sections:

- [“Installation Process” on page 158](#)
- [“Configuration Considerations” on page 181](#)

CAUTION: Because of inherent differences in the underlying application schemas, the Analytics Bridge may not perform a complete mapping of all Presentation layer columns in the Siebel Analytics repository. This may also affect those dashboard reports built from the columns that are not mapped. For a list of Presentation layer columns and reports known to be affected, see Technical Note 429, located on SupportWeb.

Installation Process

The Analytics Bridge installation process consists of configuring the Siebel Analytics application to read Bridge-specific repository files instead of the standard Analytics repositories. All of the Analytics Bridge-specific files have been shipped on a separate Bridge-specific CD-ROM and are located in the 704_Bridges folder. The files in this folder need to be installed in the appropriate Siebel Analytics directories and then manually configured. This section describes the specific steps to complete the installation process and describes what to do with the various files provided in the 704_Bridges folder.

The installation process for the Analytics Bridge consists of ten major steps:

- 1** [“Begin the Standard Installation of Siebel Analytics 7.5” on page 159](#)
- 2** [“Pause the Standard Installation of Siebel Analytics” on page 159](#)
- 3** [“Replace the Informatica Repository File” on page 161](#)
- 4** [“Continue the Installation of Siebel Analytics” on page 161](#)
- 5** [“Replace the Siebel Analytics Repository File” on page 162](#)
- 6** [“Import New Siebel OLTP Schema Definitions” on page 163](#)
- 7** [“Apply Schema Definitions to the Physical Database” on page 169](#)
- 8** [“Enable Siebel Analytics Screens” on page 169](#)
- 9** [“Import Language-Independent Siebel Seed Data” on page 171](#)
- 10** [“Localize the Siebel Analytics Bridge” on page 173](#)
(Perform this step only if you wish to view Siebel Analytics data in a non-English environment.)

NOTE: If you have already installed Siebel Analytics 7.5 and created the Informatica repository, you will need to delete the Informatica repository and continue from [Step 3](#). For instructions on deleting the Informatica repository, see [“Installing the Siebel Data Warehouse” on page 53](#).

Begin the Standard Installation of Siebel Analytics 7.5

Before you can install the Analytics Bridge, you must review [Chapter 2, “Installing and Configuring the Siebel Data Warehouse,”](#) for the process of installing the standard version of Siebel Analytics. The installation consists of these steps:

- Begin the Bridge installation by starting the Siebel Data Warehouse Installation Wizard. The Siebel Data Warehouse installation process is shown in [Figure 3, “General Process Flow for Installing Siebel Data Warehouse”](#) on page 44.
- Complete the installation steps up to, but not including, 2.2.1 A: Restore Informatica Repository. Before implementing step 2.2.1 A, you must pause the installation and switch to the following procedures.

Pause the Standard Installation of Siebel Analytics

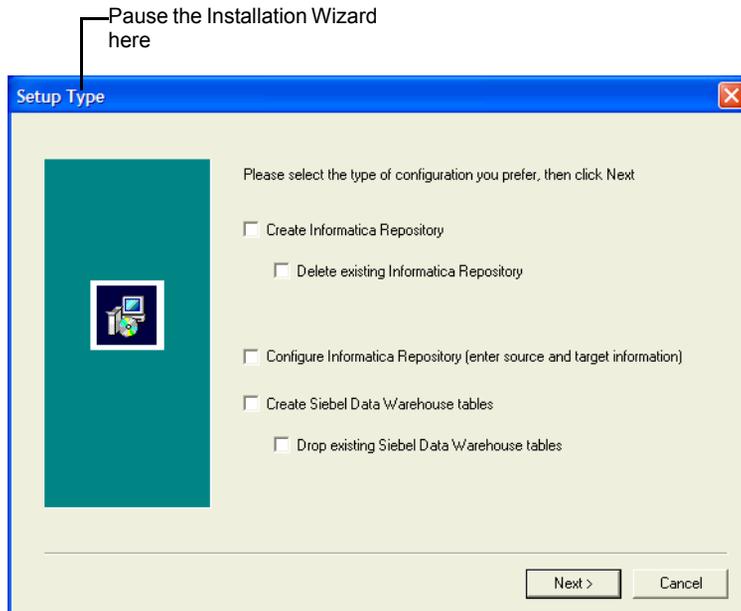
Use the following procedure to pause the standard installation of Siebel Analytics.

To pause the Siebel Analytics installation

- 1 Using the Siebel Analytics Installation Wizard, make sure you have completed the steps in the preceding list, until you get to the Siebel Analytics–Siebel Data Warehouse Configuration Setup screen.

NOTE: See [Chapter 2, “Installing and Configuring the Siebel Data Warehouse,”](#) for more information about Steps 1 through 3.

- At this point, when the Siebel Analytics Installation Wizard displays the following Siebel Analytics–Siebel Data Warehouse Configuration Setup screen, do not click Next. Leave the Installation Wizard using Alt + Tab.



NOTE: Do not close the Installation Wizard.

- In Windows Explorer, perform the next steps.

Replace the Informatica Repository File

The Analytics Bridge product contains a dedicated Informatica repository (.rep) file that provides the Bridge ETL functionality. You must move the Informatica repository file manually into the appropriate folder location in Siebel Analytics to enable this functionality.

NOTE: The .rep file must be replaced before proceeding with the restoration of the Informatica repository.

To replace the Informatica repository file

- 1 Import the Informatica 7.0.4 Analytics Bridge repository file:

7.0.4 Bridge Application	Copy	From	To
Horizontal Bridge	Siebel_DW_Rep_704.rep	704_Bridge\Horizontal folder	SiebelAnalytics\DW\dwrep\Informatica\Repository\

- 2 Return to the Installation Wizard using Alt-Tab.

Continue the Installation of Siebel Analytics

Once you have replaced the standard .rep file with the Bridge-specific .rep file, resume running the remainder of the standard Siebel Analytics Installation Wizard.

- 1 Complete the remaining parts of [“Installing the Siebel Data Warehouse” on page 52](#) and all of [“Configuring the Repository Server Using the Repository Administration Console” on page 67](#).
- 2 When you are prompted to provide the name of your Informatica .rep file, use the file name Siebel_DW_Rep_704.rep.

Replace the Siebel Analytics Repository File

Along with an Informatica repository (.rep) file, the Siebel Analytics Bridge product also contains a Siebel Analytics repository (.rpd) file, which provides customized metadata for the Analytics Bridge application. You must move this .rpd file manually into the appropriate folder location in the Siebel Analytics directory to enable this functionality.

To replace the Siebel Analytics repository file

- 1 Import the Siebel 7.0.4 Analytics Bridge-specific Siebel Analytics repository file:

Copy	From	To
SiebelAnalytics_704.rpd	704_Bridge folder	SiebelAnalytics\Repository\

- 2 Configure Siebel Analytics to point to the Bridge-specific .rpd file.

In order for Siebel Analytics to access the 7.0.4 Bridge-specific repository (.rpd) file, you must change a configuration setting in the NQSConfig.ini file. Initially, the Repository section of the NQSConfig.ini file shows the following entry:

```
[ REPOSITORY ]  
Star = siebelanalytics.rpd, DEFAULT;
```

Comment out the original Siebel Analytics repository entry and create a new entry for the 7.0.4 Bridge-specific .rpd file, as follows:

```
[ REPOSITORY ]  
Star = siebelanalytics_704.rpd DEFAULT;  
#Star = siebelanalytics.rpd, DEFAULT;
```

NOTE: The Bridge Application uses the same Siebel Analytics Web Catalog as the preconfigured Siebel Analytics 7.5 product. Therefore, no additional Web Catalog installation or configuration is necessary for the Web Catalog portion of the Siebel Analytics product.

Import New Siebel OLTP Schema Definitions

After the Bridge-specific Siebel Analytics and Informatica repositories have been installed, update the 7.0.4 Siebel eBusiness operational application's database (the OLTP database).

NOTE: You need to be running Siebel Tools for this part of the procedure.

To import new schema definitions into the OLTP application

- 1 Copy the following file:

Copy	From	To
objects_704_bridge.sif	704_Bridge folder	objects_704_bridge.sif \tools\objects

For Japanese and Korean language users of the Analytics Bridge, the objects_704_bridge.sif file encoding parameter must be changed for proper import. Using a text editor, the following change must be made to the first line in the file:

- Preconfigured .sif file encoding parameter:

```
<?xml version="1.0" encoding="windows-1252"?>
```

- Change for Japanese language:

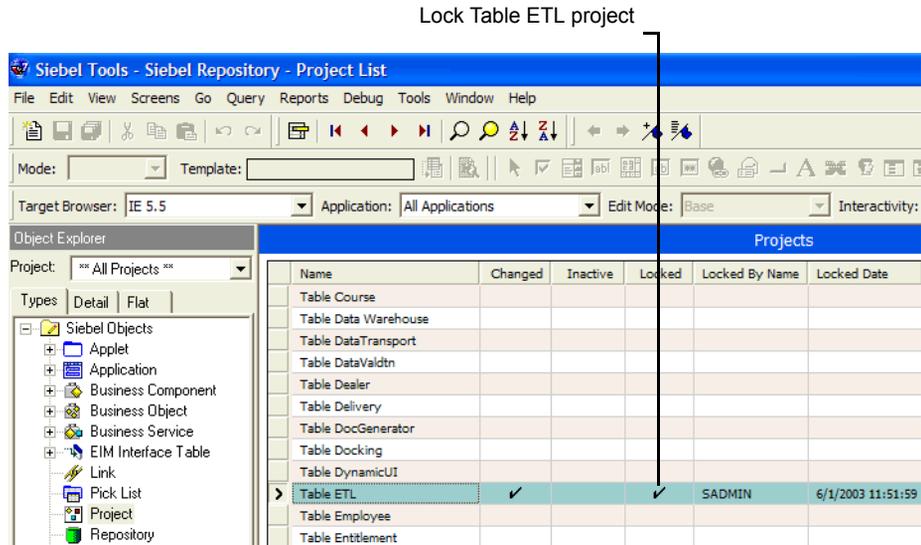
```
<?xml version="1.0" encoding="Shift_JIS"?>
```

- Change for Korean language:

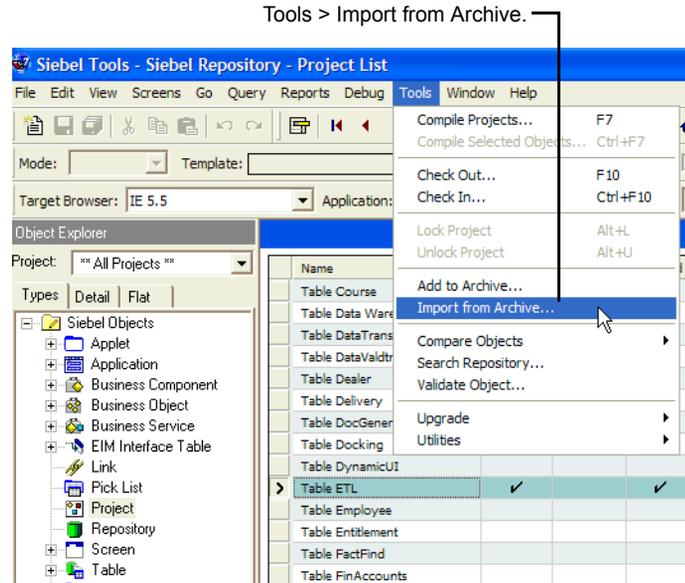
```
<?xml version="1.0" encoding="KS_C_5601-1987"?>
```

- 2 Open Siebel Tools, pointing to the development database.
- 3 In Object Explorer, click Project.

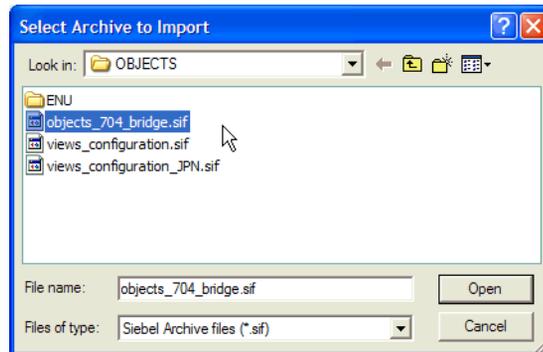
- 4 In the *Table ETL* Projects list row, click in the Locked column to check out (lock) the Table ETL project.



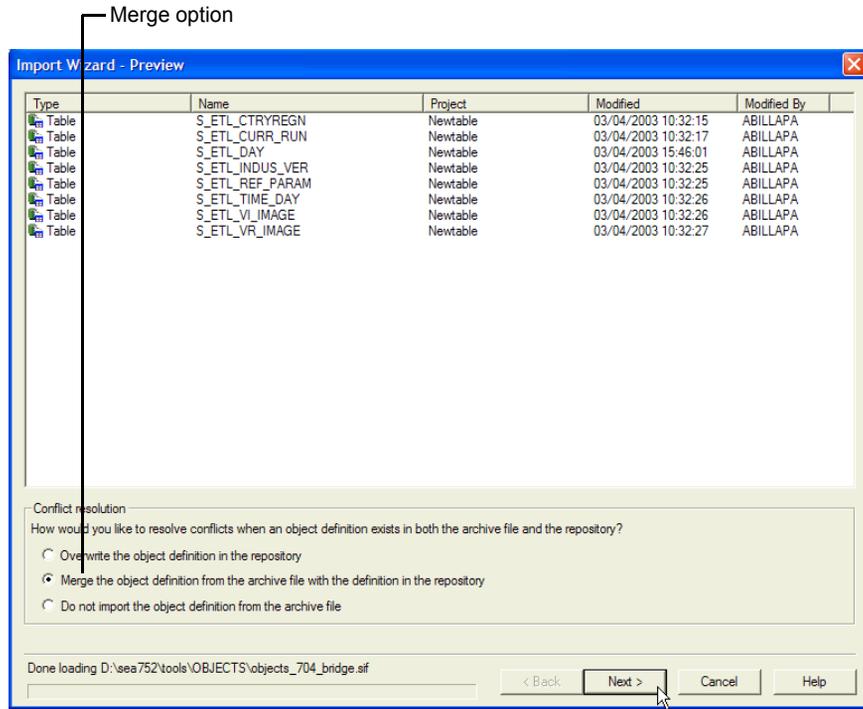
- 5 Navigate to Tools > Import from Archive.



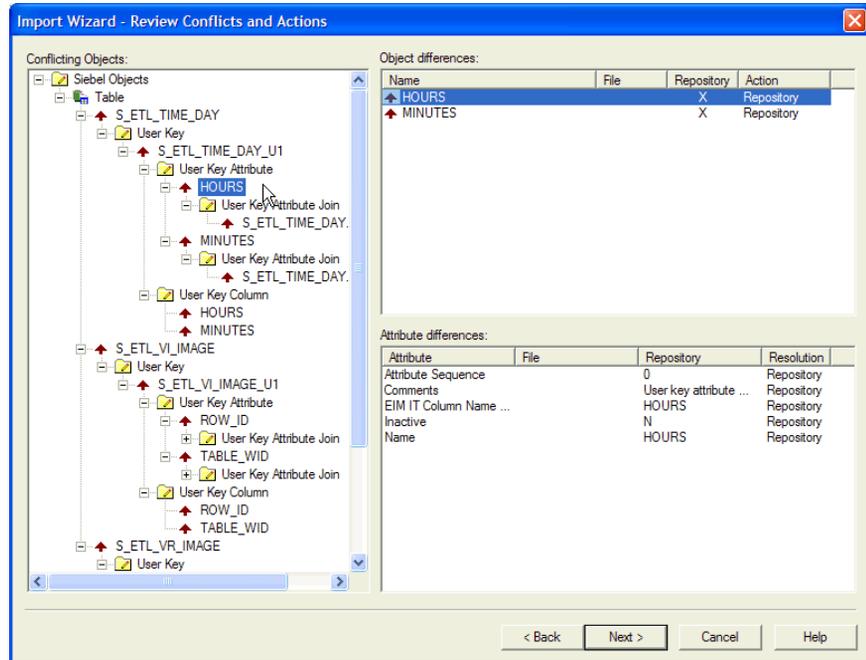
- 6 In the Select Archives to Import window, select the objects_704_bridge.sif file.



- 7 Select Open. When you open the bridge .sif in Tools, the Import Wizard—Preview screen appears, listing the Analytics Bridge tables. Be sure to select the Merge option, and then click Next.

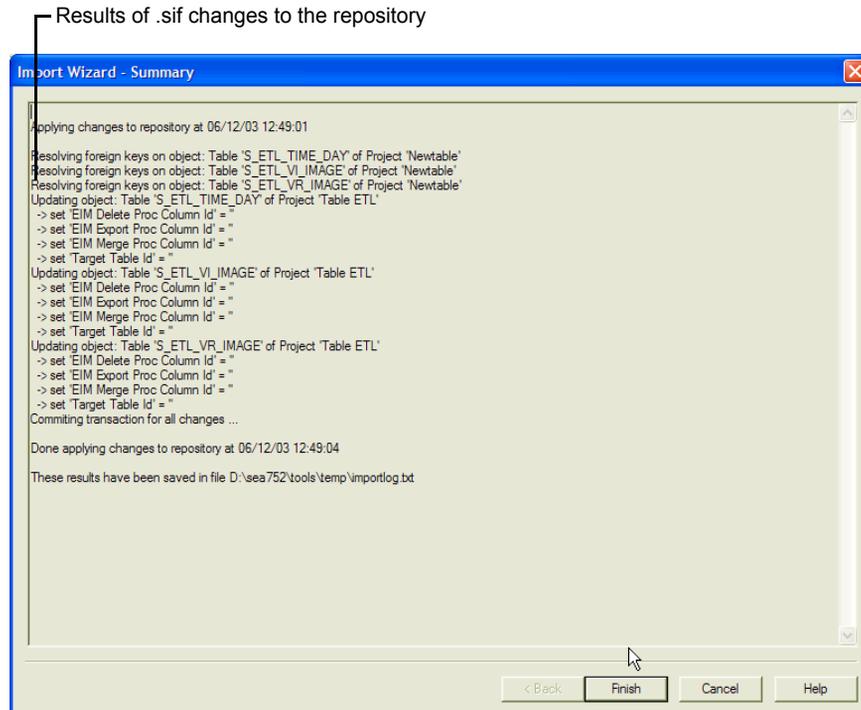


- 8 Click Next. The Import Wizard—Review Conflicts and Actions screen appears. Use this screen to review the differences in objects and attributes between old and new .sif files. (In the following example, clicking the user key attribute HOURS in the S_ETL_TIME_DAY table shows two object differences, with the attribute differences for HOURS shown in the bottom right pane.)



- 9 Click Next. A dialog box warns you that continuing will modify your repository, and lists the objects that will be inserted, deleted, or updated. Clicking Yes imports the changes.

- When the import process is finished, the Import Wizard—Summary screen appears, showing you a summary of the .sif changes to the repository files.



NOTE: All the objects imported in this process should be new to your 7.0.4 repository, therefore there should be no conflict due to an import. However, should there be a conflict message, choose the second Conflict Resolution option: Merge the object definition from the archive file with the definition in the Repository.

- In the next screen, click Finish to complete the import process.

Apply Schema Definitions to the Physical Database

Once imported into Siebel Tools, the new schema must be applied to the physical database (the OLTP).

To apply schema definitions to the physical database

- 1** In Siebel Tools, go to the Table screen. Search for S_ETL*.
You should see the following tables:
 - S_ETL_CTRYREGN
 - S_ETL_CURR_RUN
 - S_ETL_DAY
 - S_ETL_INDUS_VER
 - S_ETL_REF_PARAM
 - S_ETL_TIME_DAY
 - S_ETL_VI_IMAGE
 - S_ETL_VR_IMAGE
- 2** Select all these tables, and click Apply at the top of the screen.
- 3** In the next window (Apply Schema), under the entry Tables, select Current Query from the dropdown. Under the subsequent entries, enter the connection parameters for the development database. (Your connection information will vary depending on your particular database platform and on the configuration of your particular database environment.)
- 4** Click Apply.
- 5** Leave Siebel Tools open for the next procedure.

Enable Siebel Analytics Screens

Using the 7.0.4 Analytics Bridge, users can view Siebel Analytics dashboards from within the Siebel operational application. To enable this functionality, you must add new Siebel Analytics-related screens and views to your Siebel 7.0.4 operational application. This process requires the use of Siebel Tools.

This procedure is for customers using an English language version of the Bridge application. Customers using a non-English language bridge should not perform the following steps. Instead, non-English language bridge customers should, after completing the Import Language Independent Siebel Seed Data Step below, follow the procedure in [“Localize the Siebel Analytics Bridge” on page 173](#).

To import new repository objects into the OLTP application

- 1 Copy the following file:

Copy	From	To
views_configuration.sif	704_Bridge\Localization\ ENU folder	views_configuration.sif \tools\objects

- 2 Open Siebel Tools.
- 3 From Tools > Import from Archive, select the view_configuration.sif file.
- 4 When importing the file, use the Merge option. This process adds a set of Analytics Views, Screens, Fields, and Applets used to view Siebel Analytics content with the Siebel operational application.
- 5 Perform manual activation and inactivation of certain Siebel screen and views.

After the import has taken place, certain Siebel screens and views must be manually activated or inactivated to optimally configure the bridge. The manual configuration steps required are:

Screen	View	Manual Step Required
ISS Analytics Screen	ISS Dashboard 1 View	Inactivate View
ISS Analytics Screen	SSO ISS Dashboard 1 View	Inactivate View
Siebel Answers	Siebel Delivers View	Inactivate View
Siebel Answers	SSO Siebel Delivers View	Inactivate View
ISS Analytics Screen	ISS Dashboard 2 View	Activate View
ISS Analytics Screen	SSO ISS Dashboard 2 View	Activate View

Screen	View	Manual Step Required
ISS Analytics Screen	ISS Dashboard 3 View	Activate View
ISS Analytics Screen	SSO ISS Dashboard 3 View	Activate View

- 6 Compile a new .srf file.
- 7 In the Siebel Analytics application, update the Integration Administration Screen with information pertaining to the Siebel Analytics Server. See the section in *Siebel Analytics Installation and Configuration Guide* on completing the Siebel Analytics initialization in the Siebel eBusiness application.

Import Language-Independent Siebel Seed Data

Siebel seed data must also be installed to enable a fully functioning Bridge. This updates the seed data in the Siebel transactional database for items such as responsibility data and lists of values information.

To import language-independent seed data

- 1 Copy the following files:

Copy	From	To
seed_704_bridge.dat	704_Bridge folder	Local Machine
seed_704_bridge_<xxx>.inp (where <xxx> corresponds to the database platform being used)		

- 2 Open a command line, and go to the same directory where you copied the .dat and .inp files.

- 3 Replace each of the following connection parameters with the values appropriate to your database environment, and then run the appropriate import command from the following table.

NOTE: The command you run depends on which database platform you are using.

- Connection parameters:
 - UserName
 - Password
 - ODBCDataSource
 - DatabaseOwner
- Import command (*one* of the following):

Database Platform	Run Import Command
DB2UDB	<pre>\$\$SIEBELSERVERROOT\bin\dataimp /u \$UserName /p \$Password /c "\$ODBCDataSource" /d \$DatabaseOwner /f seed_704_bridge.dat /w y /q 100 /h Log /x f /i seed_704_bridge_db2udb.inp /l seed_704_bridge_db2udb.log</pre>
MSSQL	<pre>\$\$SIEBELSERVERROOT\bin\dataimp /u \$UserName /p \$Password /c "\$ODBCDataSource" /d \$DatabaseOwner /f seed_704_bridge.dat /w y /q 100 /h Log /x f /i seed_704_bridge_mssql.inp / l seed_704_bridge_mssql.log</pre>
Oracle	<pre>\$\$SIEBELSERVERROOT\bin\dataimp /u \$UserName /p \$Password /c "\$ODBCDataSource" /d \$DatabaseOwner /f seed_704_bridge.dat /w y /q 100 /h Log /x f /i seed_704_bridge_oracle.inp /l seed_704_bridge_oracle.log</pre>

Localize the Siebel Analytics Bridge

If your organization requires that Siebel Analytics data be viewed in a language other than English, you must also perform two additional steps as part of the Bridge installation and configuration:

- Add new localized Siebel Analytics screens and views
- Add localized seed data for metadata translations

These processes must be performed once for each language in which your data is to be viewed.

For additional information about deploying the Siebel Data Warehouse in non-English environments, see [“Deploying Informatica and Siebel Data Warehouse in Non-English Environments”](#) on page 27.

Add New Localized Siebel Analytics Screens and Views

Use the following procedure to add new localized Siebel Analytics screens and views.

To add new localized screens and views

- 1 Copy the following file:

Copy	From	To
views_configuration_ < lan > .sif (where < lan > corresponds to the language to be installed)	704_Bridge \Localization\ < la n > folder	views_configuration_ < lan > .sif \tools\objects

- 2 Open Siebel Tools.
- 3 From Tools > Import from Archive, select the views_configuration.sif file.
- 4 When importing the file, use the Merge option. This process adds a set of Analytics Views, Screens, Fields, and Applets used to view Siebel Analytics content with the Siebel operational application.

- 5 Perform manual activation and inactivation of certain Siebel Analytics screen and views.

After the import has taken place, certain Siebel Analytics screens and views must be manually activated or inactivate to optimally configure the bridge. The manual configuration steps required are:

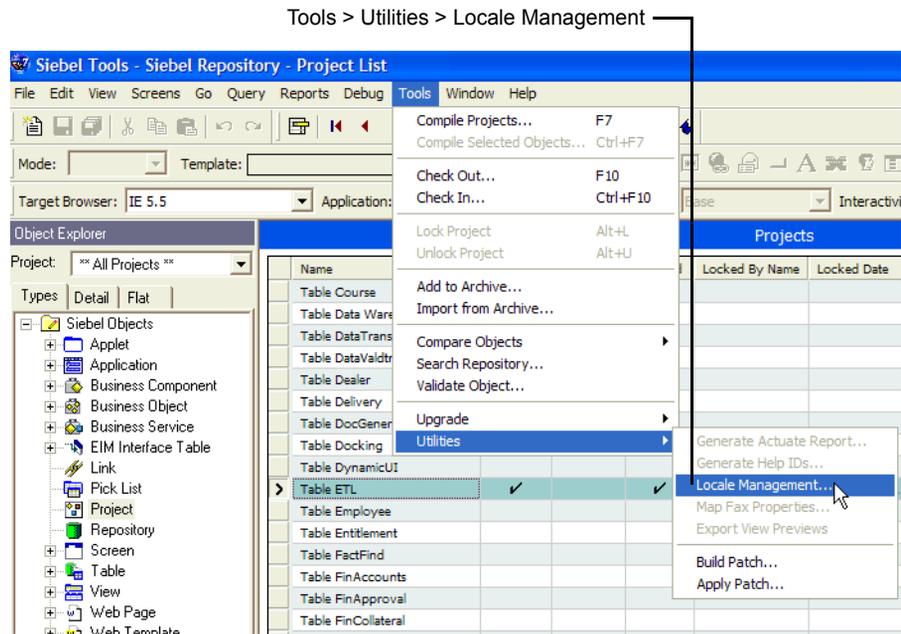
Screen	View	Manual Step Required
ISS Analytics Screen	ISS Dashboard 1 View	Inactivate View
ISS Analytics Screen	SSO ISS Dashboard 1 View	Inactivate View
Siebel Answers	Siebel Delivers View	Inactivate View
Siebel Answers	SSO Siebel Delivers View	Inactivate View
ISS Analytics Screen	ISS Dashboard 2 View	Activate View
ISS Analytics Screen	SSO ISS Dashboard 2 View	Activate View
ISS Analytics Screen	ISS Dashboard 3 View	Activate View
ISS Analytics Screen	SSO ISS Dashboard 3 View	Activate View

- 6 Compile a new .srf file.

- 7 Copy the following file:

Copy	From	To
< lan > _Locale.txt (where < lan > corresponds to the language to be installed)	704_Bridge \Localization\ < lan > folder (where < lan > corresponds to the language to be installed)	< lan > _locale.sif\ tools\objects

- 8 Navigate to Tools > Utilities > Locale Management. Open Locale Management.

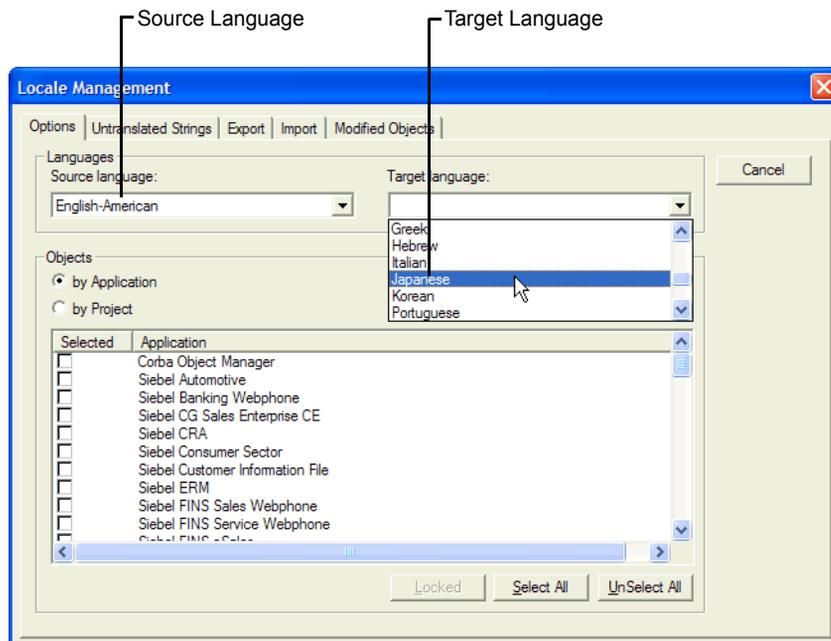


- 9 In the Locale Management window Options tab, from the Source and Target Language drop-down lists, select the names applicable to your locale. Use the following table:

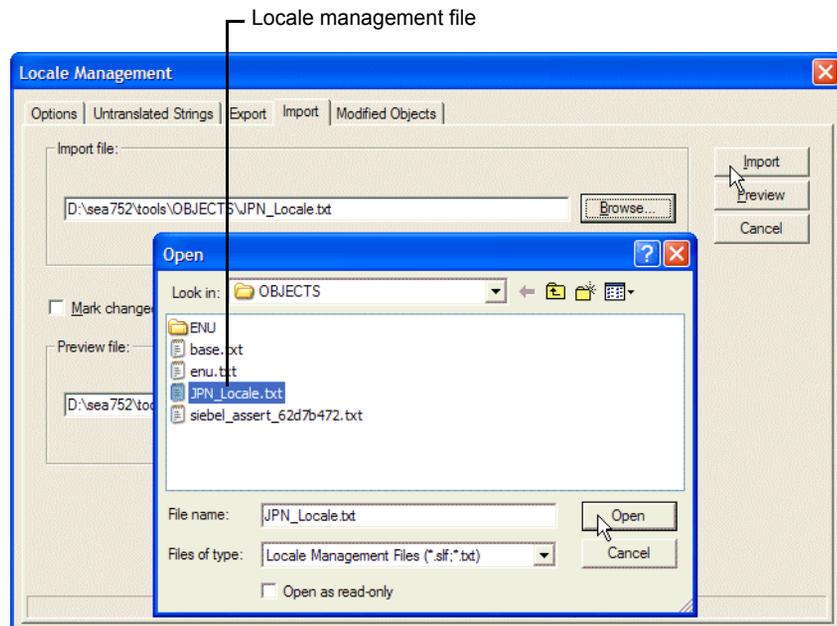
The Siebel 7.0.4 to 7.5 Analytics Bridges

Installation Process

Locale Code	Source Language	Target Language
DAN	Engelsk - amerikansk	Dansk
DEU	Englisch (USA)	Deutsch
ESN	Inglés americano	Español (moderno)
FRA	Anglais (E.U.)	Français
ITA	Inglese americano	Italiano
NLD	Engels-Amerikaans	Nederlands
PTB	Inglês americano	Português do Brasil
SVE	Engelska-amerikansk	Svenska
JPN	英語 (U.S.)	日本語
CHS	美英	中文 - 中
KOR	영어.미국	한국어



- 1 In the Locale Management window Import Tab, click Browse to access the ~\tools\objects folder. From the \tools\objects folder, select the < lan > _locale.txt file you copied in [Step 7 on page 174](#). Click Import.



- 2 In the Siebel Analytics application, update the Integration Administration Screen with information pertaining to the Siebel Analytics Server. See the section in *Siebel Analytics Installation and Configuration Guide* on completing the Siebel Analytics initialization in the Siebel eBusiness application.

Add Localized Seed Data for Metadata Translations

Use the following procedure to add localized seed data for metadata translations.

To import Locale seed data into the Siebel OLTP database

- 1 Copy the following files:

Copy	From	To
seed_704_bridge__ < lan > .dat (where < lan > corresponds to the language being used)	704_Bridges\localization\ < lan > folder (where < lan > corresponds to the language being used)	Local Machine
seed_704_bridge_ < lan > .inp (where < lan > corresponds to the language to be installed)	704_Bridges\localization\ < lan > folder (where < lan > corresponds to the language being used)	Local Machine

- 2 Open a command line, and navigate to the same directory where you copied the .dat and .inp files.
- 3 Replace these connection parameters with the values appropriate to your database environment, and then run the following import command, replacing < lan > in the command with the appropriate code for the language to be installed.
 - Connection parameters:
 - UserName
 - Password
 - ODBCDataSource
 - DatabaseOwner
 - Import command:

```

$SIEBELSERVERROOT\bin\dataimp /u $UserName /p $Password /c
"$ODBCDataSource" /d $DatabaseOwner /f
seed_704_bridge_<lan>.dat /w y /q 100 /h Log /x f /i
seed_704_bridge_<lan>.inp /l seed_704_bridge_<lan>.log

```

NOTE: For the dataimp utility to work under Oracle, your local and DB server must have the same language setting. Change the DB server language setting to the localized language, then try again to run dataimp.

Siebel Analytics 7.0.4 Bridge Files

The contents of each of the files included in the 704_Bridge folder is shown in [Table 28](#).

Table 28. Files Used by the Analytics Bridges

File Name	Purpose of File
Siebel_DW_Rep_704.rep	The Informatica repository file containing the objects and code required to populate the 7.5 Siebel Data Warehouse with the 7.0.4 Siebel transactional data. (This file replaces the standard .rep file provided with Siebel Analytics version 7.5.)
SiebelAnalytics_704.rpd	The Siebel Analytics repository file containing all of the analytical metadata mapping rules to take physical data warehouse tables and columns and map them to presentation layer metrics and facts. (This file replaces the standard .rpd file provided with Siebel Analytics version 7.5.)
objects_704_bridge.sif	The Siebel Archive File containing the logical definition of the ETL tables.

Table 28. Files Used by the Analytics Bridges

File Name	Purpose of File
seed_704_bridge.dat	The Siebel Seed Data file containing language-independent seed data records for the following tables: <ul style="list-style-type: none"> ■ S_ETL_SRC_TABLE ■ S_LST_OF_VAL ■ S_RESP ■ S_APP_VIEW_RESP ■ S_APP_VIEW ■ S_WI_SYMURL ■ S_WI_SYMURL_ARG ■ S_ETL_CTRYREGN ■ S_ETL_INDUS_VER ■ S_ETL_TIME_DAY ■ S_ETL_PARAM
<ul style="list-style-type: none"> ■ seed_704_bridge_db2udb.inp ■ seed_704_bridge_mssql.inp ■ seed_704_bridge_oracle.inp 	Import file used to control the import of the seed_704_bridge.dat file to a particular database platform.
seed_704_bridge_< lan >.dat	Set of Siebel seed data files containing translations for all the Siebel Analytics metadata objects. Each file contains all the translations for a single language. These files place translation-related seed data into the S_MSG table in the Siebel OLTP database.
seed_704_bridge_< lan >.inp	Set of import files used to control the import of the language seed files to the database.
views_configuration_< lan >.sif	Siebel Archive file containing new Siebel Analytics-related screens and views used by the 7.0.4 Bridge Application. File varies based on the language installed.
< lan >_Locale.txt	Set of text files that contain translations for Siebel Analytics-related Siebel screens and views.

Configuration Considerations

After installing the Analytics Bridge, replacing the applicable repositories, and loading new Siebel seed data files, you must also create Siebel Analytics users and, if applicable to your organization, configure the database tables for Siebel Delivers.

Creating Siebel Analytics Users in Siebel 7.0.4 eBusiness Applications

Siebel Analytics uses responsibilities defined in the Siebel operational application to control access to its data objects. For more information on Siebel Analytics security configuration and integration with Siebel operational applications, see the chapter on user authentication in *Siebel Analytics Installation and Configuration Guide*.

The language-independent seed data step of the Bridge installation process creates Siebel Analytics responsibilities in your organization's Siebel 7.0.4 eBusiness application. After the installation of these responsibilities, you must assign users in your organization to these new Siebel Analytics responsibilities using the operational application's Responsibilities module. The responsibilities assigned to a particular user control the level of access that user has within Siebel Analytics. Users not assigned to any Siebel Analytics responsibility cannot access the Siebel Analytics application.

Creating Database Tables for the Siebel Delivers Scheduler

NOTE: This step is applicable only if you are using the Siebel Delivers application.

Siebel Analytics Scheduler uses four database tables to store pertinent information about a report job, its instances, and its parameters. For users of Siebel 7.5 eBusiness operational applications, these four tables reside within the Siebel operational (OLTP) database and are installed as part of the Siebel 7.5 operational applications installation process.

These tables do not exist in the Siebel 7.0.4 OLTP schema. Customers using Siebel eBusiness 7.0.4 operational applications who want to make use of the Siebel Delivers product must manually install the four database tables to one of their organization's databases. It is recommended that these tables be created in the same database as the database schema for the Siebel operational application. However, these tables can be created in an independent database as well. The section on creating and configuring Siebel Analytics tables in *Siebel Analytics Installation and Configuration Guide* describes the process of creating these tables.

NOTE: The table-creation process described in *Siebel Analytics Installation and Configuration Guide* must be followed by every customer who configures the Siebel Analytics 7.0.4 to 7.5 Bridge, and who intends to use Siebel Delivers, even though the reference documentation states that it is only required for Siebel Analytics Stand-Alone customers.

For more information on the Siebel Delivers application, see *Siebel Analytics Scheduler Guide*.

Installing and Configuring the Siebel Data Warehouse in DB2 for OS/390

C

The Siebel Data Warehouse consists of the following components:

- Informatica repository
- Star schema tables that hold the Siebel Data Warehouse information (populated by Informatica)

For most databases, these two components are installed in the same database. However, if you are using IBM DB2 UDB running under OS/390, then these two components (the repository and the star schema) must be installed in separate databases. The differences in installation between DB2 UDB on OS/390 and DB2 UDB on other platforms are these:

- The Informatica repository cannot be installed on DB2 UDB running under OS/390.
- The Informatica repository must be installed on some other supported RDBMS (such as DB2 running under Windows or UNIX, or MS SQL or Oracle).
- The Siebel Data Warehouse tables can be installed on DB2 for OS/390.

This appendix describes Siebel Data Warehouse installation and configuration for the DB2 UDB running under OS/390.

NOTE: Prior to executing the batches with Informatica, restore the Informatica repository and create the data warehouse tables. These tables are empty until populated by the predefined batches. See [“Populating the Initial Siebel Data Warehouse” on page 97](#).

Prerequisites for Installing DB2 under OS/390

To install the Siebel Data Warehouse, first make sure the following prerequisites are met:

- You are an experienced DB2 DBA or have the assistance of an experienced DB2 DBA.
- You have installed the Gateway Server, Siebel Server, and Database Server.
- An OLAP database has been created for the Siebel Data Warehouse on DB2 for OS/390.
- You have created and configured an ODBC connection from the Administrator's workstation to the Siebel Data Warehouse, using DB2 Connect.
- A database has been created for the Informatica repository. This database cannot be on DB2 for OS/390. This database can be on a DB2, Oracle, or SQL Server RDBMS.
- You have created, configured, and tested an ODBC connection from the Administrator's workstation to the Informatica repository database.
- The login to the database is the same as the schema qualifier.
- For installing the star schema tables, you have done one of the following:
 - You have already installed the Siebel Installer on the Administrator Workstation.
 - You are running the Siebel Installer on the Administrator Workstation from the Siebel Windows Server Programs CD-ROM. Navigate to the SES folder on that CD and run setup.exe.

Installing Siebel Data Warehouse for DB2 under OS/390

The following are the main steps required to complete the installation of the Siebel Data Warehouse:

- a [“To install the Informatica repository on DB2 for OS/390”](#)

- b** [“To configure the Informatica repository on DB2 for OS/390” on page 187](#)
- c** [“To install the star schema tables for DB2 on OS/390” on page 188](#)

NOTE: Do not use the following procedures unless you have completed [“To install the Siebel Data Warehouse using the Siebel Data Warehouse installer” on page 54](#).

To install the Informatica repository on DB2 for OS/390

- 1** In [Step 3 of “To install the Siebel Data Warehouse using the Siebel Data Warehouse installer” on page 54](#), fill out the Prerequisite Check screen to create and configure the Informatica repository, using the following table as a guide, and then click Next. Do not create the Siebel Data Warehouse tables because it is covered in [“Installing the Star Schema Tables on DB2 for OS/390” on page 188](#).

Option	Default Setting	Comments
Create Informatica Repository	Selected	Select this to create an Informatica repository specific to Siebel Analytics.
Delete existing Informatica Repository	Clear	Select this only when you need to delete an existing Informatica Repository. This is not needed for a new installation, as there is no existing Informatica Repository. However, if you have a failed installation and need to do a clean install, select this box.
Configure Informatica Repository (enter source and target information)	Selected	Select this to configure the Informatica repository's connection to the Siebel Transaction Database.

Installing and Configuring the Siebel Data Warehouse in DB2 for OS/390

Installing Siebel Data Warehouse for DB2 under OS/390

Option	Default Setting	Comments
Create Siebel Data Warehouse Tables	Selected	Clear this box. You create the Siebel Data Warehouse (star schema) tables using a separate installer after completing the Informatica repository configuration. For information on creating the Siebel Data Warehouse tables, see "Installing the Star Schema Tables on DB2 for OS/390" on page 188.
Drop existing Siebel Data Warehouse Tables	Clear	Do not select this. If you need to drop existing tables, have your DBA drop them.

2 Specify the connection information to be used for the Siebel Transaction Database.

This information will be placed in the Informatica Repository, to be used by Informatica to access the Siebel Transaction Database. Fill out the form, using the following table as a guide, and then click Next.

Field	Description
Platform	Choose DB2.
Connect String	Enter the native connect string (example: server@database) to the Siebel Transaction Database.
Table Owner	Identify the table owner of the Siebel Transaction Database.
Password	Enter the password (double-entry confirmation).
MS SQL DBMS Name	Leave this blank.
Unicode	Do not select. This is reserved for future compatibility with Unicode databases.
ODBC Data Source	Enter the Data Source Name (DSN) for the Siebel Transaction Database.

- 3 Specify the connection information to the database that holds the Informatica repository. Fill out the form, using the following table as a guide, and then click Next.

NOTE: Enter connection information to the database that holds the Informatica repository, even though the window indicates the Siebel Data Warehouse.

Fields	Description
Platform	Choose the RDBMS that holds the Informatica repository (DB2, MS SQL Server, or Oracle).
Connect String	Enter the native connect string (example: server@database) to the database that holds the Informatica repository.
Table Owner	Identify the table owner.
Password	Enter the password (double-entry confirmation).
ODBC Data Source	Enter the Data Source Name (DSN) for database that holds the Informatica repository.
Unicode	Do not select. This is reserved for future compatibility with Unicode databases.
Email address	Enter an email address or group distribution name. When Informatica completes a build of the Siebel Data Warehouse, it sends an email notification to this address. Enter a complete email address. Example: MarketingSupervisor@yourcompany.com

- 4 Click Finish to close the window.

To configure the Informatica repository on DB2 for OS/390

- 1 Open Informatica Workflow Manager.
- 2 Connect to the repository.
- 3 From the Server Configuration menu, choose Database connections.
- 4 In the Database Connections window, select OLAP and click Edit.

- 5 In the Edit Database Connection window, fill out the form using the following table as a guide.

Field	Description
Database Type	Choose DB2, which is the RDBMS for the Siebel Data Warehouse.
Data Source	Choose OLAP.
User Name	Enter the user name for the database that holds the Siebel Data Warehouse on DB2 for OS/390.
Password	Enter the password for the database that holds the Siebel Data Warehouse on DB2 for OS/390.
Connect String	Enter the connect string (example: server@database) for the Siebel Data Warehouse on DB2 for OS/390.
Code Page	Choose a code page. If in doubt, choose MS Windows Latin 1 (ANSI) superset of Latin.

- 6 Install the Siebel Data Warehouse tables.
 - Proceed to [“Installing the Star Schema Tables on DB2 for OS/390” on page 188](#).

Installing the Star Schema Tables on DB2 for OS/390

The following procedure installs the star schema tables into the Siebel Data Warehouse for DB2 on OS/390.

NOTE: There is no automated utility to drop the star schema tables. In the event of a failed installation, have a DBA drop the tables before you reinstall.

To install the star schema tables for DB2 on OS/390

- 1 From the Start menu, choose Programs > Siebel Enterprise Server 7.5 > Configure DB Server.

- 2** In the Siebel Software Configuration Utility window, click Next to accept the default values for the following pages:
 - Gateway Server Address
 - Siebel Server Directory
 - Siebel Database Server Directory
- 3** In the RDBMS Platform page, select IBM DB2 UDB for OS/390 and z/OS, and then click Next.
- 4** In the Siebel Database Operation page, select Install Database, and then click Next.
- 5** In the Select Installation Operation page, click Install Siebel Data Warehouse Database, and then click Next.
- 6** In the ODBC Data Source Name page, enter the ODBC Data Source Name for the Siebel Data Warehouse, and then click Next.
- 7** In the Database User Name page, enter the Database User Name and Database Password (with double entry confirmation), and then click Next.
- 8** In the Siebel Schema Qualifier page, enter the Schema Qualifier for the Siebel Data Warehouse, a Security Group ID (default is SSEROLE), and then click Next.
- 9** In the Select Installation Type page, click Standard Install, and then click Next.
- 10** In the Select Installation Mechanism page, click either Generate DDL into Files or Run DDL Automatically, and then click Next. You may prefer to generate DDL into files if you wish to examine the DDL information prior to executing it. If you clicked Generate DDL into Files, the installer prompts for a file name.
- 11** Accept the default or change the path name. You can use the Browse feature to specify a fully qualified path name. Make sure to run the DDL before proceeding to the next step.
- 12** In the Siebel Schema Layout page, click an option button, and then click Next.
- 13** In the Storage Group for Table Spaces page, enter Storage group for Table spaces (default is SYSDFLT) and Storage group for Indexes (default is SYSDFLT), and then click Next.

- 14** In the 4 KB Buffer Pool Name page, enter the names of the 4 KB Buffer pool (default is BP1) and the 16 KB Buffer pool (default is BP16K1) for the Siebel Data Warehouse, and then click Next.
- 15** In the 32 KB Buffer Pool Name page, enter the names of the 32 KB Buffer pool (default is BP32K1) and the Index Buffer pool (default is BP2) for the Siebel Data Warehouse, and then click Next.
- 16** In the Database Name Prefix page, enter the Database Name Prefix, and then click Next.
- 17** In the Encoding Scheme page, click ASCII or EBCDIC, and then click Next. If you are not sure which to choose, then choose ASCII.
- 18** In the Configuration Parameter Review page, review the entries. If any are incorrect, then click Previous and repair the problem. If all entries look correct, click Finish.
- 19** In the runnow window, click OK.

The Siebel Upgrade Wizard window opens. A command line window opens. The installer creates the Storage.ctl file and then executes the install using the parameters you specified. When complete, the command line window closes.
- 20** In the Siebel Upgrade window, when the word Complete appears in the window's title bar, click OK.

Customers upgrading to Siebel Data Warehouse versions 7.5.2.101 and later need to apply a patch to the Siebel transactional database (OLTP). This patch contains some critical changes. This appendix applies to Siebel Data Warehouse versions 7.5.2.101 and later.

This patch is generic to both Windows 2000 and UNIX platforms.

Applying SIF Files to the Database

The process consists of

- Backing up the repository
- Importing the .sif using Siebel Tools
- Verifying the application of the .sif
- Applying the .sif file contents to the Siebel transactional database schema
- Verifying the schema modification

NOTE: To apply this patch, your Siebel application deployment must be on version 7.5.2.

Backing Up the Repository

Whether or not the SIF file is being applied to a development or to a production environment, back up the repository before beginning the process. To back up the repository, use the Siebel utility repimexp to export the repository to a .dat file.

To back up a repository

- 1 Open a DOS window and navigate to the siebsrvr\bin directory.
- 2 Run the command `siebenv` to set the Siebel environment variables.
- 3 Export the repository to a .dat file:

```
repimexp /a e /u username /p password /c odbc /d table_owner /r
repository /f dat_file /v y /l logfile
```

Importing the SIF File

The SIF files must be imported to the repository using Siebel Tools.

NOTE: The Siebel Tools version must be from a 7.5.x Siebel applications release.

The standard procedure is that changes (such as these) should be applied to a local instance (with appropriate projects locked) and then checked back into the server repository.

To import SIF files into the repository

- 1 Log on to the repository using Siebel Tools.
- 2 Lock the related projects that are affected by the `s_etl_ref_param.sif` file.
- 3 In the menu, click on Tools > Import from Archive.
- 4 If you receive the message: “This operation should only be performed while connected to your local database. Would you like to continue anyway?” click Yes.

CAUTION: You are applying these changes directly to the server repository. Therefore it is recommended that you use a local instance and merge the changes back into the server repository using a Check-In.

- 5 Navigate to the directory containing the SIF files and open `s_etl_ref_param.sif`.

- 6 An Import Wizard shows all the Tables and Projects that are affected. Select the option Merge the object definition from the archive file with the definition in the repository, and click Next.
- 7 The Import Wizard reviews all the object conflicts between what is in the repository and what is in the SIF file. When the Import Wizard process is done, you can expand the tree under Conflicting Objects to verify the changes being applied from the SIF file to the repository. When you are done, click Next.
- 8 A warning appears: “The operation is going to modify your repository ...” Click Yes.
- 9 When the process finishes, click Finish.

Verifying the Patch Application

After the SIF import is complete, verify that the table `s_etl_ref_param` was created in the OLTP database.

Applying the SIF Contents to the Schema

After importing and verifying the `s_etl_ref_param.sif` file, you must apply it to the Siebel transactional database schema.

To apply the SIF contents to the physical OLTP schema

- 1 In Siebel Tools, in the Object Explorer, click on the Table tab and query for `S_ETL_REF_PARAM` (the list of tables affected by the imported SIF file).
- 2 Click Apply. You may get the warning message: “You are connected to a local database ...,” but this may be ignored.
- 3 The Apply Schema wizard appears. In the Tables drop-down menu, select Current Query. Fill in the appropriate values for the following parameters:
 - Table space.
 - 16K table space.
 - 32K table space.

- Index space.
- Privileged user ID.
Privileged user id should correspond to the database tableowner.
- Privileged user password.
Privileged user password should correspond to the database tableowner password.
- ODBC data source.

NOTE: Leave the Table groupings file parameter blank.

- 4 After filling in the parameters above, click Apply. Siebel Tools modifies the physical schema of the database. This may take 5 to 10 minutes. If the process is successful, Siebel Tools returns the message “Changes successfully applied.”

If an error message is returned, check that the parameters you entered are correct and try applying the schema again.

Verifying the Physical OLTP Schema Modification

After the SIF contents have been applied to the physical database, verify that the physical schema of the database has been correctly modified.

Capturing Row Deletion Changes

E

The data warehouse provides delete change capture for all source tables in the OLTP. Delete propagation is provided for the Organization dimensions, Person dimensions, and all the visibility tables.

NOTE: For more information about customizing the Siebel Data Warehouse, see Technical Note 420, located on SupportWeb.

This appendix includes the following topics:

- [“Delete Change Capture” on page 195](#)
- [“Delete Propagation” on page 196](#)

Delete Change Capture

In this method, Informatica identifies a row for deletion in the change capture tables. Informatica captures the deleted row information in the S_ETL_I_IMAGE table in the OLTP. The structure of this table is similar to the S_ETL_R_IMAGE table, with one additional column, OPERATION. This column stores a value identifying whether the corresponding data has been inserted (I), updated (U), or deleted (D).

The Informatica mappings that identify and create rows in the S_ETL_I_IMAGE are:

- SDEINC_IdentifyDeletes_Visibility
- SDEINC_IdentifyDeletes_pass0
- SDEINC_IdentifyDeletes_pass1
- SDEINC_IdentifyDeletes_pass2
- SDEINC_IdentifyDeletes_pass3

- SDEINC_IdentifyDeletes_pass4

The following Informatica sessions remove deleted rows from S_ETL_R_IMAGE for an ETL run so that, the S_ETL_R_IMAGE does not include rows that were deleted from the OLTP.

- SDEINC_DeleteFromImageForDeletedRecords
- SDEINC_DeleteFromImageForDeletedRecords_Visibility
- SDEINC_DeleteIncrementalImage. (Internal Use)

This is an important synchronization process because it compares the OLTP table with the S_ETL_R_IMAGE. Without this synchronization, the same rows are continuously marked for deletion for every run.

Delete Propagation

In this method rows that are identified as deleted are handled in the data warehouse tables. A deleted row can be flagged as deleted (known as a *soft delete*) or actually deleted from a data warehouse table (known as a *hard delete*).

- Soft Deletes

The soft delete propagation is provided for the Person and Organization dimensions. The relevant Informatica mappings are:

- SDE_OrganizationDimension_LoadDeletedRows
- SIL_OrganizationDimension_LoadDeletedRows
- SDE_PersonDimension_LoadDeletedRows
- SIL_PersonDimension_LoadDeletedRows

- Hard Deletes

All visibility-related tables have Informatica mappings that remove deleted rows. These mappings have the following naming convention:

- SDE_X_Party_LoadDeletedRows

where X stands for the module like Account, Contact, Activity, and so on.

NOTE: To build additional soft or hard deletes, the Informatica mappings can be used as templates. See Technical Note 420, located on SupportWeb, for details.

Capturing Row Deletion Changes

Delete Propagation

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