Siebel Server Sync Guide

Version 7.7, Revision A

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Contents

1 What's New in This Release

What's New in Siebel Server Sync Guide, Version 7.7, Revision A

Table 1 lists changes in this version of the documentation. This revision provides increased accuracy and usability to support release 7.7 of Oracle's Siebel Server Sync for Microsoft Exchange (SSSE) software.

Table 1. What's New in Siebel Server Sync Guide, Version 7.7, Revision A

Topic	Description
"SSSE Deployment Options" on page 14	Added a caution regarding workflows.
Supported PIMs	Deleted topic. Supported platforms information is in *Siebel System Requirements and Supported Platforms.*
"Initial Extract and Ongoing Extract" on page 19	Added more information about case-sensitivity during initial extract and deletion behavior during ongoing synchronization.
"SSSE System Requirements" on page 28	Added information about clustered environments, Active Directory forest requirement, troubleshooting a shortage of database connections, and time zone requirements. Information about required operating systems has been moved to *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.
"Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34	Corrected topic. Not all tasks in this process must be performed on both PIMSI Engine machines and Exchange Connector machines.
"Installing Exchange 2000 System Management Tools" on page 34	Corrected topic. This task is required for Exchange Connector machines, but not for PIMSI Engine machines that do not run Exchange Connector.
"Installing Exchange Server Service Pack 3 Rollup" on page 35	Added information about why this software is needed on PIMSI Engine and Exchange Connector machines.
"Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation" on page 37	Corrected topic. Not all tasks in this process must be performed on both PIMSI Engine machines and Exchange Connector machines.
"Installing Exchange 2003 System Management Tools" on page 37	Corrected topic. This task is required for Exchange Connector machines, but not for PIMSI Engine machines that do not run Exchange Connector.

Table 1. What’s New in Siebel Server Sync Guide, Version 7.7, Revision A

Topic	Description
“Configuring Firewalls for Use With SSSE” on page 39	Added a new topic containing information about how to configure firewalls for use with SSSE.
“Modifying the Database” on page 44	Added information about the automatic recreation of the index S_SD_SV_PROFILE_F1.
“Modifying the Repository” on page 45	Added information in Step 1 about preserving customizations when modifying the Siebel Repository for use with SSSE.
“Modifying Seed Data” on page 49	Corrected topic. In Step 6. changed table heading from Siebel Value to PIM Value.
“Verifying SSSE Component Definitions” on page 52	Added information in Step 7 about how addresses are stored in Exchange and in the Siebel database.
“About Tuning SSSE for Optimal Performance” on page 55	Added a new topic about specific SSSE parameters that can affect performance.
“Setting Up the Connector Share Directory” on page 56	Modified topic to clarify share name requirements.
“About Exchange Service Account Privileges” on page 58	Added a new topic about the privileges that the Exchange Connector needs for proper operation.
“Configuring Exchange Service Account Credentials” on page 58	Modified topic to add information about Send As privileges that must be granted explicitly for some versions of Exchange.
“Configuring the Database for SSSE” on page 61	Updated information about which script to use in supported database environments. Added information about reinstalling SSSE triggers after using the Generate Triggers server component. Added a caution about changing triggers.
“Populating DB_LAST_UPD Columns” on page 63	Corrected topic. Optimizer does not populate the column with data, but it should be used after the column is populated. Removed the references to scripts that are no longer provided with the product.
“Configuring Exchange Connector Application DCOM Security” on page 65	Added conceptual information about DCOM settings. Corrected Step 9 of procedure for configuring Exchange Connector DCOM security. The user identity that the Exchange Connector uses must have permission to read Exchange mailboxes, but does not need to match the identity of the user who starts the Siebel Server Windows services.
“Configuring the Generic Siebel Organizer” on page 71	Added more information about the requirements for the Generic Siebel Organizer Login.
“Tuning SSSE Siebel Profile Parameters” on page 73	Added information about the following parameters: AttendeeQueryForceEmailLower, ExtractStartDateFormat, ForceTranscode, MaxAlarmLeadMinutes, and ResolveContactbyEmailAddress.

Table 1. What's New in Siebel Server Sync Guide, Version 7.7, Revision A

Topic	Description
"Configuring Exchange Connector Parameters" on page 79	Modified topic to clarify the share name requirements. Added information about specifying the preferred Global Catalog servers for Exchange Connector to contact.
"About Synchronizing Additional Fields" on page 88	Added information about why synchronization is not supported for certain fields.
"Setting User-Level Synchronization" on page 118	Added information to clarify how the Visibility setting affects which records are available for synchronization by a specific user.
"About SSSE File Maintenance" on page 124 and "Reinitializing an SSSE User" on page 124	Added information about the effects of unmapping and remapping a user.
"About SSSE Log Files" on page 125	Added information about error messages that can safely be ignored.
"About Moving or Deleting Mailboxes for SSSE Users" on page 127	Added a new topic about how to move or delete the Exchange mailbox for an SSSE user.
"Factors That Determine Calendar Synchronization" on page 131 and "Creating, Modifying, or Deleting an Appointment" on page 132	Added information about how archiving affects the synchronization of Calendar records.
"About Minor Error Messages" on page 148	Added a new topic that lists error messages for minor synchronization problems.
"System Requirements for Siebel Outlook Add-In" on page 154	Information about supported versions of Microsoft Outlook has been moved to *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.
"(Optional) Setting Siebel Outlook Add-In Objects and Fields" on page 156	Added a new topic that describes how to make optional adjustments to the information that Outlook Add-In provides.
"About Embedded Outlook Calendar" on page 165	Modified topic wording to improve clarity.
"System Requirements for Embedded Outlook Calendar" on page 167	Information about supported versions of Microsoft Outlook has been moved to *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.
"Enabling Embedded Outlook Calendar Visibility" on page 168	Modified topic to include additional requirements.

What’s New in Siebel Server Sync Guide, Version 7.7

Table 2 lists changes in a prior revision of the documentation to support release 7.7 of the software.

Table 2. What’s New in Siebel Server Sync Guide, Version 7.7

Topic	Description
All Topics	Siebel Server Sync for Microsoft Exchange Server (SSSE) is new functionality in release 7.7.2.3 that allows server-based synchronization of Siebel Calendar, Activity, and Contact data between Microsoft Exchange Servers and Siebel Servers. This allows SSSE users to view the synchronized data either in a Siebel application or in a Microsoft Exchange client application such as Microsoft Outlook.

2 Introducing Siebel Server Sync

This chapter provides introductory information about Siebel Server Sync. It includes the following topics:

- "About SSSE" on page 13
- "SSSE Deployment Options" on page 14
- "SSSE Synchronization Options" on page 15

About SSSE

Siebel Server Sync is a server-side integration product that synchronizes Siebel application data with Personal Information Manager (PIM) Server products. The current version of Siebel Server Sync supports synchronization with Microsoft Exchange Server only. This version of the Siebel Server Sync product is referred to as Siebel Server Sync for Microsoft Exchange Server (SSSE). Synchronization with Microsoft Exchange Server allows Exchange client software such as Microsoft Outlook to access the synchronized data.

SSSE can synchronize data that appears in the My Activities, My Calendar, My Contacts, My Personal Contacts, and All Employees views of the Siebel application. Synchronization of data between the Siebel application and Exchange is done automatically and with a frequency an administrator can tune. No user action is required to initiate synchronization. However, each user must use the Add To Sync List command to designate the individual Contact and Employee records that SSSE will synchronize for that user.

If anyone adds or changes a record in the Siebel application, SSSE automatically exports or synchronizes the change with Exchange. Likewise, if anyone adds or changes a record in Exchange, SSSE automatically imports or synchronizes the change with the Siebel application. SSSE performs these operations on a single-user basis, using a synchronization schedule that administrators can adjust. Typically, SSSE synchronizes a data change within a few minutes after a user makes the original change.

SSSE supports three deployment options as described in "SSSE Deployment Options" on page 14.

SSSE Deployment Options

Figure 1 shows SSSE deployment options in relation to Siebel Server and Microsoft Exchange Server.

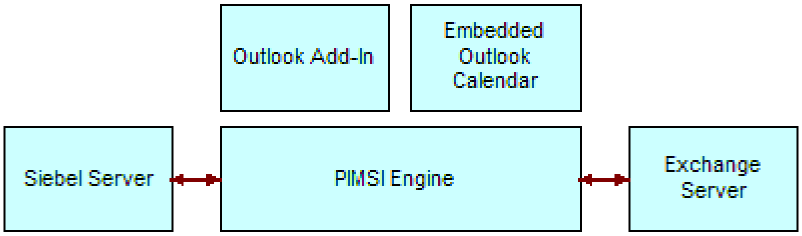

Figure 1. SSSE deployment options with related servers

SSSE supports three deployment options:

- **PIM Server Integration (PIMSI) Engine and Dispatcher.** Allows server-based synchronization of data between the Siebel application and Exchange. See Chapter 3, "Siebel Server Sync Architecture Overview."
- **Siebel Outlook Add-In.** Allows users to access Siebel data from within Microsoft Outlook and associate Siebel data with Outlook Contacts, Calendar and Tasks. See Chapter 9, "Setting Up and Using Siebel Outlook Add-In."
- **Embedded Outlook Calendar.** Allows users to access their Microsoft Outlook calendar from within the Siebel application. See Chapter 10, "Setting Up and Using Embedded Outlook Calendar."

You can choose to deploy these options in the following combinations:

- PIMSI Engine and PIMSI Dispatcher only
- PIMSI Engine and PIMSI Dispatcher plus Siebel Outlook Add-In or Embedded Outlook Calendar
- PIMSI Engine and PIMSI Dispatcher plus Siebel Outlook Add-In and Embedded Outlook Calendar

See the following chapters for information about PIMSI Engine and PIMSI Dispatcher:

- Chapter 3, "Siebel Server Sync Architecture Overview"
- Chapter 4, "Installing Siebel Server Sync"
- Chapter 5, "Configuring Siebel Server Sync"
- Chapter 7, "Administering Siebel Server Sync"
- Chapter 8, "Using Siebel Server Sync"

After you install and set up PIMSI Engine and PIMSI Dispatcher, then you can install Siebel Outlook Add-In or Embedded Outlook Calendar or both, if you choose to do so. See these chapters:

- Chapter 9, "Setting Up and Using Siebel Outlook Add-In"

- Chapter 10, "Setting Up and Using Embedded Outlook Calendar"

CAUTION: Do not activate PIMSI workflows unless Siebel Technical Support or Siebel Expert Services instructs you to do so. The workflows that are provided in seed data are not currently used by SSSE, and can cause PIMSI Engine crashes if improperly deployed.

SSSE Synchronization Options

SSSE supports three data synchronization options:

- **Full Sync.** Bidirectional synchronization of data between the Siebel database and one or more Microsoft Exchange Servers
- **Export Only.** Exportation of data from the Siebel database to one or more Microsoft Exchange Servers
- **None.** No synchronization of data

Administrators set synchronization options. Administrators can set these options for each user on each domain. *Domain* refers to the information domains: To Do items, Business Contacts, Personal Contacts, Employees, and Calendar. *User* can be individual users or groups of users specified by Organization, Position, or User List. For more information, see "Setting SSSE Group and User Access Controls" on page 118.

Table 3 shows the default synchronization settings.

Table 3. Default SSSE Synchronization Settings

Object	Full Sync	Export Only
To Do	X	
Calendar	X	
Personal Contact	X	
Business Contact	X	
Employee		X

NOTE: SSSE does not currently support synchronization of email.

If synchronization is enabled for Calendar and Activities/To Do items for a user, then SSSE automatically synchronizes new or changed calendar and activity records for that user. Contacts use an opt-in strategy. This means that the user must use the Add To Sync List command to direct SSSE to synchronize a Contact, Personal Contact, or Employee record before the record can be synchronized between the Siebel Server and the Microsoft Exchange mailbox for that user. If a Contact, Personal Contact, or Employee record originates in Microsoft Exchange, the user must also specify an appropriate Category setting before SSSE will synchronize the record. For more information, see "Using Siebel Server Sync" on page 129.

Related Topics

"Setting Siebel Domain-Level Synchronization" on page 111

"Designating Contact Records for Synchronization" on page 141

"Designating Employee Records for Synchronization" on page 146

3 Siebel Server Sync Architecture Overview

This chapter provides an overview of the architecture of SSSE, including information about the SSSE Server Components, PIMSI Engine and PIMSI Dispatcher. It includes the following topics:

About PIMSI Engine

PIMSI Engine is a Siebel Server Component that enables synchronization of data between Siebel Enterprise Server and Microsoft Exchange Server. This component allows the synchronization of Calendar appointments, Tasks (called To Do items in Siebel applications), and Contacts (Business, Personal, and Employees), between the Siebel database and the Exchange server (or servers).

PIMSI Engine administration and configuration is conducted using centralized administration and configuration screens in the Siebel application. No end-user installation is required for synchronization of Calendar appointments, Tasks, or Contacts. End users designate the contact records to be synchronized, but other end user action is not required. Synchronization can be selectively enabled for individual users or groups of users. After synchronization is initiated between Exchange and the Siebel application for a specific user, synchronization is performed automatically for that user. The time that elapses between when a data change takes place and when the change is synchronized depends on a system-wide configuration parameter that the administrator can adjust.

NOTE: Because PIMSI Engine is server based, users must use Offline Store (OST) files to replicate data between Microsoft Exchange Servers and their local Outlook client, or they must store their Outlook data exclusively on the Microsoft Exchange Server. PIMSI Engine cannot synchronize data stored in Personal Folders (PST) files.

If a PIMSI Engine goes offline in a Siebel implementation that has multiple PIMSI Engines, the remaining PIMSI Engines pick up the workload of the nonfunctioning PIMSI Engine. When that PIMSI Engine comes back online, workloads for all PIMSI Engines rebalance automatically.

About PIMSI Dispatcher

PIMSI Dispatcher is a Siebel Server Component that performs the following actions at regular, configurable intervals:

- Determines which users require synchronization within a synchronization cycle due to changes in Siebel data. For example, if 1000 users have synchronization enabled, Dispatcher identifies which of those users have had Siebel data change since the user's last successful synchronization.
- Sends a synchronization Task Request to PIMSI Engine for each user who has synchronization enabled. The Task Request contains a SiebelChangeFlag property that indicates whether Siebel data changes need to be synchronized or not. For all such Task Requests, PIMSI Engine synchronizes any changes in that user's Exchange data that have been made since the user's last successful synchronization. If SiebelChangeFlag is set to Y, then PIMSI Engine also synchronizes changes in the user's Siebel data.

NOTE: If the SSSE Dispatcher goes offline, synchronization stops until the SSSE Dispatcher is restarted. You can set PIMSI Dispatcher to restart automatically upon failure.

About Exchange Connector

Exchange Connector is an SSSE component that is responsible for all communications with Exchange Server.

NOTE: Exchange Connector is not a Siebel Server component.

You can deploy Exchange Connector in either of the following ways:

- Deploy one Exchange Connector at a central location within the Siebel Enterprise
- Deploy multiple Exchange Connectors at geographic locations near Exchange Servers

Important SSSE Terminology

This topic provides definitions of some important terms related to SSSE operations:

- **Siebel Domain.** A set of Siebel objects that SSSE considers for synchronization with the PIM. Such Siebel Objects currently include Business Contacts, Calendar, Employees, Personal Contacts, and To Do items.
- **PIM Domain.** A set of PIM objects that SSSE considers for synchronization with Siebel. Such PIM objects currently include Microsoft Exchange Calendar, Contacts, and Tasks.
- **Domain Mapping.** A mapping between Siebel Domain objects and PIM Domain objects. This determines which Siebel Domain object is synchronized with which PIM Domain object.
- **Outbound Synchronization.** The process of sending data from the Siebel Server to the PIM Server.
- **Inbound Synchronization.** The process of sending data from the PIM Server to the Siebel Server.

Initial Extract and Ongoing Extract

This topic describes the Initial Extract process and the Ongoing Extract process which synchronize Siebel data and Microsoft Exchange Server data.

For each enabled user, SSSE periodically extracts changes from both the Siebel database and the Microsoft Exchange data store, and then applies the changes from each data store to the other. The SSSE administrator can configure the time period between extractions to suit your business requirements. For each user, the first iteration of this periodic extraction process is called the Initial Extract, and the following extractions are called Ongoing Extracts.

During an Initial Extract, SSSE takes data from the user's Exchange folders and the Siebel database. SSSE analyzes the data to find any Exchange records that match Siebel records, and then synchronizes all of the applicable data.

For example, suppose that there are 10 Contacts in a user’s Exchange folder and 20 completely different Business Contacts in the same user’s My Contacts list in the Siebel Application. (In other words, none of the user’s Contacts in Exchange match any of that user’s Business Contacts in the Siebel database.) If the user has synchronization enabled and has used the Add To Sync List command to request synchronization of all 20 Siebel Business Contacts, then, after Initial Extract is performed for that user, both the user’s Exchange Contact folder and the user’s My Contacts list will contain 30 contact listings. As part of this process, for any contacts that SSSE imports from Exchange to the Siebel database, SSSE automatically adds the user to the record’s Sync List for future synchronizations. The Sync List for the record is a multi-value group (MVG) field that lists the employees who synchronize that record.

The Initial Extract process prepares the user’s data for Ongoing Extract synchronizations. More detailed information about the Initial Extract process is provided later in this topic.

The Ongoing Extract process repeatedly inspects a user’s data for changes. Ordinarily, it synchronizes just the data that has changed since SSSE performed the most recent successful synchronization. However, in some circumstances, such as changes in the synchronization level of a domain, all of the user’s data within that domain is reextracted.

For more details about how extractions work, see “PIMSI Engine Data Flow” on page 30.

About Synchronizing Records during Initial Extract

During the Initial Extract process for a particular user, for each domain that the user can synchronize, the Initial Extract process compares that user's Exchange records in that domain with that user's Siebel records in the corresponding Siebel domain.

The actions that follow this comparison depend on the following factors:

- **Synchronization level for the current domain and user.** The synchronization level determines whether SSSE will synchronize a domain. For a domain that SSSE can synchronize, the synchronization level determines whether information can flow in both directions between the Exchange Server and the Siebel Database, or whether information must always flow in one direction.
- **Existence or absence of a matching record.** SSSE compares Exchange records and Siebel records to determine when corresponding records need to be modified and when new records need to be created.

- **Data values in key fields.** When SSSE compares Exchange records and Siebel records, SSSE only checks the values in certain key fields to determine whether the records match. For information about setting key fields, see "Setting Key Fields" on page 117.
- **PIM Category Value.** Depending on how your SSSE implementation is configured, SSSE may or may not synchronize Exchange Contact records depending on whether the Category field in the Exchange record has a value that matches the PIM Category value setting in your Siebel implementation, as described later in this topic.
- **Sync List Status.** SSSE may or may not synchronize Siebel Contact records depending on whether the Sync List flag is set for the record and user in question.
- **Status of case sensitivity settings for your Siebel implementation.** Siebel implementations can be set for case-sensitivity or case insensitivity at the application level, at the AOM (application object manager) level, or at the field level. The status of these settings affects whether or not SSSE detects differences between two field values that differ only in capitalization. By default, Siebel applications are set to be case-sensitive. For example, the default settings cause SSSE to detect no match between a value of ABC Corp on the PIM and a value of ABC CORP in the Siebel database. In such a case, SSSE synchronizes the records separately, resulting in both forms of the record being present on the PIM and in the Siebel database. However, if your Siebel application is case-insensitive in the context where SSSE checks for matching records, then SSSE would treat these two values as a match. For information about setting applications, AOMs, and fields to be case-insensitive, see *Applications Administration Guide*.

For information about how SSSE handles Exchange Task and Calendar records during Initial Extract, see Table 5.

Table 5. Initial Extraction Behavior for an Exchange Task Record or Calendar Record

Synchronization Level	Similar Record Exists in Siebel Database and is Visible to the User	Exchange Result	Siebel Result
Full Sync or Export Only	Yes	SSSE overwrites the Exchange record with Siebel data	SSSE associates the Siebel record with the Exchange record
Full Sync	No	No change to Exchange record	SSSE creates a new Siebel record and associates it with the Exchange record

SSSE has a configurable parameter called OnlySyncCategorizedContacts that can be set to TRUE or FALSE to suit your business requirements. This Boolean parameter setting determines whether or not Initial Extract operations synchronize Exchange Contact records that have the Category field set to a specified value.

If the OnlySyncCategorizedContacts parameter is set to FALSE, all the user's Exchange Contact records are considered for synchronization. By default, this parameter is set to FALSE. For more information about how SSSE handles Exchange Contact records during an Initial Extract when the OnlySyncCategorizedContacts parameter is set to FALSE, see Table 6 on page 22.

If the OnlySyncCategorizedContacts parameter is set to TRUE, then, in order to be synchronized during an Initial Extract operation, Exchange Contact records must have the Category field set to a value that matches the Siebel setting called PIM Category Value. (The default value for the PIM Category Value setting is Siebel Contact). For more information about how SSSE handles Exchange Contact records during an Initial Extract when the OnlySyncCategorizedContacts parameter is set to TRUE, see Table 7 on page 24.

Table 6. Initial Extract Behavior for an Exchange Contact Record when OnlySyncCategorizedContacts Parameter is Set to FALSE

Synchronization Level	Category Field Set to Specified PIM Category Value	Similar Record Exists In Siebel Database and is Visible in the User's Sales Rep View	Corresponding Siebel Record has the User in Sync List	Exchange Result	Siebel Result
Full Sync or Export Only	Yes	Yes	Yes	SSSE overwrites the Exchange record with Siebel data	SSSE associates the Siebel record with the Exchange record
Full Sync	Yes	Yes	No	No change to Exchange record	SSSE creates a new Siebel record, places the user in the record's Sync List, and associates the Siebel record with the Exchange record
Full Sync	Yes	No	Not applicable	No change to Exchange record	SSSE creates a new Siebel record, places the user in the record's Sync List, and associates the Siebel record with the Exchange record

Table 6. Initial Extract Behavior for an Exchange Contact Record when OnlySyncCategorizedContacts Parameter is Set to FALSE

Synchronization Level	Category Field Set to Specified PIM Category Value	Similar Record Exists In Siebel Database and is Visible in the User's Sales Rep View	Corresponding Siebel Record has the User in Sync List	Exchange Result	Siebel Result
Full Sync or Export Only	No	Yes	Yes	SSSE overwrites the Exchange record with Siebel data	SSSE associates the Siebel record with the Exchange record
Full Sync	No	Yes	No	No change to Exchange record	SSSE creates a new Siebel record, places the user in the record's Sync List, and associates the Siebel record with the Exchange record
Full Sync	No	No	Not applicable	No change to Exchange record	No change to Siebel record

Table 7. Initial Extraction Behavior for an Exchange Contact Record when OnlySyncCategorizedContacts Parameter is Set to TRUE

Synchronization Level	Category Field Set to Specified PIM Category Value	Similar Record Exists In Siebel Database and is Visible in the User's Sales Rep View	Corresponding Siebel Record has the User in Sync List	Exchange Result	Siebel Result
Full Sync or Export Only	Yes	Yes	Yes	SSSE overwrites the Exchange record with Siebel data	SSSE associates the Siebel record with the Exchange record
Full Sync	Yes	Yes	No	No change to Exchange record	SSSE creates a new Siebel record, places the user in the record's Sync List, and associates the Siebel record with the Exchange record
Full Sync	Yes	No	Not applicable	No change to Exchange record	SSSE creates a new Siebel record, places the user in the record's Sync List, and associates the Siebel record with the Exchange record
Full Sync or Export Only	No	Not applicable	Not applicable	No change to Exchange record	No change to Siebel record

About Synchronizing Records during Ongoing Extract

The Ongoing Extract process is similar to the Initial Extract process but differs in the following respects:

- The only record changes that Ongoing Extract evaluates are the changes that have taken place since the last time the user was successfully synchronized.
- If a Siebel record and an Exchange record were associated with each other in a previous synchronization, key fields are not used to determine what action to take. Instead, record IDs are used when determining whether a Siebel record or Exchange record has changed. This allows users to change values in key fields while preserving the association between a Siebel record and an Exchange record.
- If a record changes in both the Siebel environment and the Exchange environment between synchronizations, SSSE treats the situation as an update conflict. The changes in the Siebel environment are preserved and the Exchange environment inherits these changes through synchronization.
- In general, if a record is modified in one environment but is deleted in the other, then the record is deleted in the remaining environment at the next synchronization. However, the behavior differs slightly depending on which domain is involved, where the deletion occurs, and when the deletion occurs, as follows:
  - If a Siebel Contact, Task, or Calendar record is synchronized to Exchange and the user deletes it in Exchange before that user's next synchronization occurs, then the next synchronization does not delete or otherwise affect the Siebel record. This is a known technical limitation.

    If, instead, the user's data is synchronized successfully at least once between the initial synchronization to Exchange and the deletion of the record in Exchange, then the results are as described in the following paragraphs.
  - If a user deletes a Contact record in Outlook that has the Private check box selected, then SSSE deletes the corresponding Siebel Personal Contact record.
  - If a user deletes a Task in Outlook, then SSSE deletes the corresponding Siebel Task record.
  - If a user deletes a To Do record in Outlook, then SSSE deletes the corresponding Siebel To Do record.
  - If a user deletes a Contact record in Outlook that does not have the Private check box selected, then SSSE removes the user from the Sync List for the corresponding Siebel Business Contact record.
  - If a user deletes a Contact record in Outlook that has the Category field set to Employee (or PIM Category Value for the Employee domain), or if the Category field is cleared, SSSE makes no changes to the corresponding Siebel record, because the Employee domain is configured for one-way synchronization, from the Siebel record to the Exchange record.
- The Category field for an Exchange Contact record must contain an appropriate value in order for the record to be synchronized to the Siebel database. Depending on the values in the Category field and whether or not the Private check box is selected, the Siebel record that corresponds to a synchronized Exchange Contact record can be any of the following Siebel record types:

- Siebel Business Contact record
- Siebel Personal Contact record
- Siebel Employee record

For more information about how Exchange Category field values and Private check box status affect corresponding Siebel record types, and vice versa, see Table 8.

Table 8. Relationships Between Exchange Contacts and Siebel Contacts and Employees

Siebel Record Type	Corresponding Exchange Contact Category Field Value	Corresponding Exchange Contact Private Check Box Status
Siebel Business Contact	match PIM Category Value setting for Siebel Business Contact domain (default value is Siebel Contact)	not selected
Siebel Personal Contact	match PIM Category Value setting for Siebel Personal Contact domain (default value is Siebel Contact)	selected
Siebel Employee	match PIM Category Value setting for Siebel Employee domain (default value is Employee)	Not applicable

For more information about how SSSE handles Exchange Contact records during an Ongoing Extract, see Table 9.

Table 9. Ongoing Extract Behavior for an Exchange Contact Record

Synchronization Level	Category Field Set to Specified PIM Category Value	Similar Record Exists In Siebel Database and is Visible in the User's Sales Rep View	Corresponding Siebel Record has the User in Sync List	Exchange Result	Siebel Result
Full Sync or Export Only	Yes	Yes	Yes	SSSE overwrites the Exchange record with Siebel data	SSSE associates the Siebel record with the Exchange record
Full Sync	Yes	Yes	No	No change to Exchange record	SSSE creates a new Siebel record, places the user in the record's Sync List, and associates the Siebel record with the Exchange record
Full Sync	Yes	No	Not applicable	No change to Exchange record	SSSE creates a new Siebel record, places the user in the record's Sync List, and associates the Siebel record with the Exchange record
Full Sync or Export Only	No	Not applicable	Not applicable	No change to Exchange record	No change to Siebel record

SSSE System Requirements

SSSE is a part of the Siebel Enterprise. SSSE is composed of the following components:

- **Siebel Enterprise Server.** Hosts one or more Siebel Servers that run the PIMSI Engine server component and the PIMSI Dispatcher server component, with the following characteristics:
  - For proper operation, one instance of the PIMSI Dispatcher component must serve your entire Siebel Enterprise. However, you can run multiple instances of the PIMSI Engine component, either on a single Siebel Server or on multiple Siebel Servers.
  - You can use SSSE in either clustered environments or nonclustered environments. Performance for SSSE in a clustered environment is roughly comparable to performance in a nonclustered environment that has multiple servers running the PIMSI Engine and the Siebel Exchange Connector components.
  - For optimum performance, it is recommended that you run the process-intensive PIMSI Dispatcher component on a machine that does not run the process-intensive PIMSI Engine component.
  - A machine that hosts the PIMSI Engine component or the PIMSI Dispatcher component must use a supported operating system. For information about operating systems currently supported, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.
  - A machine that hosts the PIMSI Engine component must be in a domain that is a part of the same Active Directory *forest* (one or more Active Directory domains that share certain characteristics and information) as the Exchange Server.
  - If your Siebel implementation experiences a shortage of connections to the database, increasing the number of PIMSI Engine components can sometimes resolve the problem. However, SSSE is only one kind of Siebel software that uses database connections. For more information about general management of database connections, see *Siebel Performance Tuning Guide*.
  - If your Siebel implementation uses Coordinated Universal Time (UTC) throughout, then SSSE automatically converts dates and times appropriately. If your Siebel implementation does not use UTC, then your Siebel Servers, Exchange Connector Host, Exchange Servers, and Database Server must all be set to use the same time zone. For more information about using UTC, see *Siebel Global Deployment Guide*.
- **Exchange Connector Host.** Houses the Siebel Exchange Connector software. The machine that serves as the Exchange Connector Host must use a supported operating system. For information about operating systems currently supported, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb. The Exchange Connector machine can be a machine that is serving as part of the Siebel Enterprise Server or another machine that resides inside your organization’s firewall.

PIMSI Engine works in conjunction with the Microsoft Exchange Server host, the machine that hosts the Microsoft Exchange Server software for Microsoft Outlook. There are no specific Siebel software requirements for the Exchange Server machines, except that you locate them in a single Active Directory forest. See your Microsoft documentation for system requirements.

NOTE: If an Exchange Server goes offline, remaining Exchange Servers continue to synchronize SSSE users. When an Exchange Server resumes operation, synchronization to that server resumes automatically.

SSSE Architecture

Figure 2 illustrates the SSSE Architecture. Each SSSE user's machine interacts with the Siebel database and the Microsoft Exchange Server Host. The communications that occur between the Siebel Database and the PIMSI Engine and PIMSI Dispatcher servers are separate from the communications that occur between the Siebel Database and individual SSSE user machines. The Exchange Connector Host acts as an intermediary for communications between PIMSI Engine and the Microsoft Exchange Server Host.

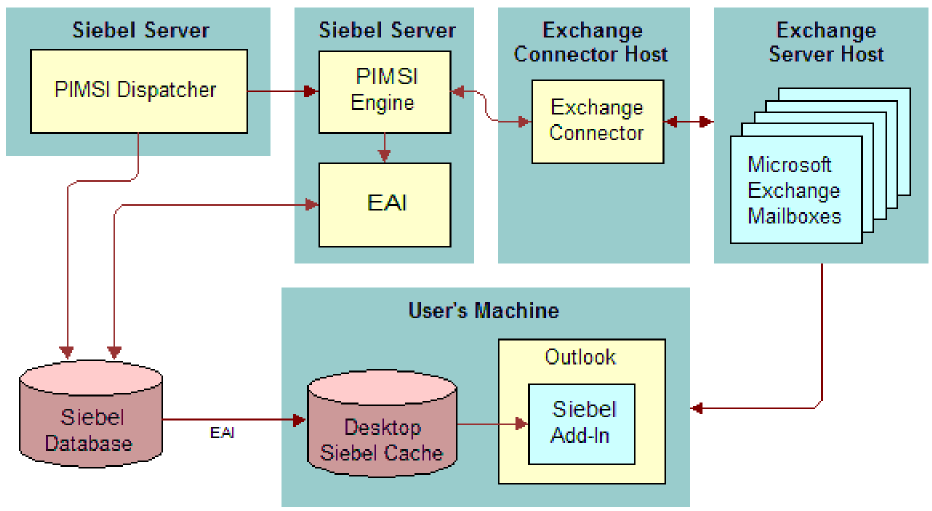

Figure 2. SSSE Architecture

If your implementation includes firewalls between SSSE components, you may need to open specific ports in the firewall to allow the various parts of the implementation to communicate with each other. For more information about using SSSE with firewalls, see "Configuring Firewalls for Use With SSSE" on page 39.

Required Components for SSSE

The SSSE server components, PIMSI Dispatcher and PIMSI Engine, handle several important functions in the synchronization process.

At regular, configurable intervals, PIMSI Dispatcher performs the following actions:

- Determines which users require synchronization within a synchronization cycle due to changes in Siebel data. For example, if 1000 users have synchronization enabled, Dispatcher identifies which of those users have had Siebel data change since the user's last successful synchronization.
- Sends a synchronization Task Request to PIMSI Engine for each user who has synchronization enabled and who requires synchronization due to changes in Siebel data.

- Sends a synchronization Task Request to PIMSI Engine for each user who has synchronization enabled, to synchronize any changes in that user's Exchange data since the user's last successful synchronization.

For each user who needs data synchronized, PIMSI Engine performs the following actions:

- Computes the incremental data change since the user's last successful synchronization
- Communicates with Exchange Connector to request data from Exchange Server
- Reads data from the Siebel database
- Performs data conflict detection and resolution
- Sends data to the Exchange Connector to be written to the user's mailbox on the Exchange Server
- Uses EAI methods to write data to the Siebel database

You can run PIMSI Engine components on multiple Siebel Servers in your Siebel Enterprise. If you set the MaxTasks and MaxMTServers parameters for the PIMSI Engine component appropriately, you can also have multiple PIMSI Engine processes running simultaneously on a Siebel Server host.

The following additional components are required for PIMSI Engine to communicate and synchronize data to and from the Exchange Server:

- **EAI components.** Siebel Enterprise Application Integration (EAI) is the primary means of communication with the Siebel database for the PIMSI Engine component. EAI includes Siebel Adapter, Data Mapper, and XML Converter.
- **Exchange Connector.** This is the liaison between PIMSI Engine and the Microsoft Exchange Server. The Exchange Connector can reside on the same machine as the Siebel Server that hosts PIMSI Engine components, or it can reside on a separate machine. The Exchange Connector uses several APIs to communicate with Exchange Server. The exact set of APIs that Exchange Connector uses may change over time, as needed for technical reasons. The Exchange Connector currently uses MAPI, ADO, WebDAV and ADSI APIs.

PIMSI Engine Data Flow

The following steps describe the data flow that takes place during either initial extractions or ongoing extractions:

1. An administrator enables a user for synchronization.
2. At preconfigured intervals, PIMSI Dispatcher determines which users have synchronization enabled. For each such user, the Dispatcher sends a Task Request to PIMSI Engine, requesting synchronization of Exchange data for that user. If the user's Siebel data has changed since the user's last successful synchronization, or if the user has not yet synchronized successfully, then the Task Request also asks for synchronization of the applicable Siebel data.
3. PIMSI Engine determines which data must be synchronized for the user, for both Siebel data and Exchange data. This involves requesting data from both the Siebel database and the Exchange Server.

4 PIMSI Engine sends data from the Siebel database to the Exchange Connector, which identifies the user's mailbox on the Exchange Server and writes to it.

5 PIMSI Engine uses EAI methods to write data from the Exchange Server to the Siebel database.

NOTE: This data flow relies upon database triggers recording information in the S_SD_SYNC_INFO table about changes to Siebel data.

4 Installing Siebel Server Sync

This chapter describes preinstallation and installation tasks for the SSSE components PIMSI Engine and PIMSI Dispatcher. It includes the following topics:

- "Roadmap for Installing SSSE" on page 33
- "Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34
- "Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation" on page 37
- "Configuring Firewalls for Use With SSSE" on page 39
- "Installing Siebel Server for PIMSI Dispatcher" on page 40
- "Installing Siebel Server for PIMSI Engine" on page 41
- "Installing Siebel Exchange Connector" on page 42

For information about hardware and software requirements, see "SSSE System Requirements" on page 28. For information about installing the Outlook Add-In deployment option, see "Process of Setting Up Siebel Outlook Add-In" on page 155. For information about installing the Embedded Outlook Calendar deployment option, see "Process of Setting Up Embedded Outlook Calendar" on page 167.

Roadmap for Installing SSSE

To install SSSE, perform the following processes and tasks:

NOTE: Preinstallation tasks for SSSE differ depending on whether you are using Microsoft Exchange 2000 Server or Microsoft Exchange Server 2003. Use the appropriate process for your environment. For information about supported versions, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.

1. "Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34 or "Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation" on page 37
2. "Configuring Firewalls for Use With SSSE" on page 39
3. "Installing Siebel Server for PIMSI Dispatcher" on page 40
4. "Installing Siebel Server for PIMSI Engine" on page 41
5. "Installing Siebel Exchange Connector" on page 42

Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation

Preinstallation tasks differ depending on which version of Microsoft Exchange Server you are using. This topic describes the process of preparing a Microsoft Exchange 2000 Server environment before installing SSSE. For information about preparing a Microsoft Exchange Server 2003 environment, see "Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation" on page 37.

This process is a step in "Roadmap for Installing SSSE" on page 33.

To prepare a Microsoft Exchange 2000 Server environment before installing SSSE, perform the following tasks. Except where otherwise indicated, perform these tasks on each PIMSI Engine machine and each Exchange Connector machine:

1. "Installing Exchange 2000 System Management Tools" on page 34
2. "Installing Exchange 2000 Server Service Pack 3" on page 34
3. "Installing Exchange Server Service Pack 3 Rollup" on page 35
4. "Installing MSXML 4.0 SP2" on page 36
5. "Checking Domain Controller Properties" on page 36

NOTE: In addition to the software requirements listed in the preceding numbered steps, a compatible version of Internet Information Services Manager (IISM) must reside on the Microsoft Exchange Server machine.

Installing Exchange 2000 System Management Tools

The following procedure briefly describes how to install Exchange 2000 System Management Tools on Exchange Connector machines.

This task is a step in "Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34.

NOTE: This task must be performed for all Exchange Connector machines, but is not required for PIMSI Engine machines that do not run Exchange Connector.

To install the Exchange 2000 System Management Tools

1. Insert the Exchange 2000 installation CD into your target server.
2. From the Exchange 2000 Setup choose the Custom setup.
3. From the Custom setup screen install only the Exchange System Management Tools.

Installing Exchange 2000 Server Service Pack 3

The following procedure briefly describes how to install Exchange 2000 Server Service Pack 3 on PIMSI Engine machines and Exchange Connector machines.

This task is a step in "Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34.

To install Exchange 2000 Server Service Pack 3

1. On the machine where you want to install the software, open a browser window and navigate to the following URL:

   http://www.microsoft.com/downloads/details.aspx?FamilyID=d89f820b-18be-4c8e-b392-84215c9df2de&DisplayLang=en

2. Create a folder named SP3 on the machine's local hard disk, or in another network-accessible location.

   You can either download this software to each machine where you want to install it, or you can download it to one network-accessible location, and install the software from that location for each applicable machine.

3. Download the EX2KSP3_server.exe file into the new SP3 folder by clicking on the EX2KSP3_server.exe link on the Web page.
4. Open the SP3 folder on your local hard disk, and then double-click EX2KSP3_server.exe.
5. In the Unzip To Folder dialog box, enter the location of the SP3 folder, and then click Unzip.
6. When the self-extraction process is complete, click OK, and then click Close.
7. Install the service pack according to the instructions provided by Microsoft.

   For example, you may be instructed to navigate to a subdirectory of the SP3 directory and then run update.exe.

Installing Exchange Server Service Pack 3 Rollup

The following procedure briefly describes how to install Exchange 2000 Server Service Pack 3 Rollup on PIMSI Engine machines and Exchange Connector machines. This patch contains critical fixes that are applied to the Exchange System Management Tools, which the PIMSI Engine and Connector need in order to communicate with Exchange Server.

This task is a step in "Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34.

NOTE: Exchange Server Service Pack 3 must be installed before you install Exchange Server Service Pack 3 Rollup. Be sure to complete both tasks.

To install Exchange Server Service Pack 3 Rollup

1. Open a browser window on your target server and navigate to the following URL:

   http://www.microsoft.com/downloads/details.aspx?FamilyId=43F5CDF6-D1E6-4476-B5F2-E17371236C3C&displaylang=en

2. Create a new folder on your local hard disk.

3 Download the EXE file into the folder you created by clicking on the Download button on the Web page.

4 Open the folder on your local hard disk, and then double-click the EXE file, and follow the installation instructions.

5 In the Unzip to Folder dialog box, enter the location of the folder you created, and then click Unzip.

6 When the self-extraction process is complete, click OK, and then click Close.

7 Run the installation package from the directory folder you created.

Installing MSXML 4.0 SP2

The following procedure briefly describes how to install MSXML 4.0 SP2 on PIMSI Engine machines and Exchange Connector machines.

This task is a step in "Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34.

To install MSXML 4.0 SP2

1 Open a browser window on your target server and navigate to the following URL:

   http://www.microsoft.com/downloads/details.aspx?familyid=3144b72b-b4f2-46da-b4b6-c5d7485f2b42&lanuageid=f49e8428-7071-4979-8a67-3cffcb0c2524&displaylang=en

2 Click the Download link on the Web page.

3 Download the installation package and install the software.

Checking Domain Controller Properties

For optimum SSSE performance, install PIMSI Engine and Exchange Connector on machines in a domain whose initially installed Domain Controller (DC) includes a copy of the Active Directory Global Catalog (GC).

The following procedure briefly describes how to determine whether a Domain Controller contains a copy of the catalog. This task is a step in "Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34.

To check Domain Controller properties

1 On a Domain Controller machine, navigate to Start > Programs > Administrative Tools > Active Directory Sites and Services.

2 Locate the correct site and select the Domain Controller server in the Servers folder.

3 Expand the server object.

4 Select NTDS Settings, and then right-click and select Properties.

5 Click the General tab, and inspect the Global Catalog check box.

If the Global Catalog check box is selected, then the Domain Controller contains a copy of the Active Directory Global Catalog.

Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation

Preinstallation tasks differ depending on which version of Microsoft Exchange Server you are using. This topic describes the process of preparing a Microsoft Exchange Server 2003 environment before installing SSSE. For information about preparing a Microsoft Exchange 2000 Server environment, see "Process of Preparing Microsoft Exchange 2000 Environment for SSSE Installation" on page 34.

This process is a step in "Roadmap for Installing SSSE" on page 33.

To prepare a Microsoft Exchange Server 2003 environment before installing SSSE, perform the following tasks. Except where otherwise indicated, perform these tasks on each PIMSI Engine machine and each Exchange Connector machine:

1. "Installing Exchange 2003 System Management Tools" on page 37
2. "Installing Exchange 2003 Server Service Pack 1" on page 38
3. "Installing MSXML 4.0 SP2 (for Exchange 2003)" on page 38
4. "Checking Domain Controller Properties (for Exchange 2003)" on page 38

NOTE: In addition to the software requirements listed here, a compatible version of Internet Information Services Manager (IISM) must reside on the Microsoft Exchange Server machine.

Installing Exchange 2003 System Management Tools

The following procedure briefly describes how to install Exchange 2003 System Management Tools on Exchange Connector machines.

This task is a step in "Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation" on page 37.

NOTE: This task must be performed for all Exchange Connector machines, but is not required for PIMSI Engine machines that do not run Exchange Connector.

To install the Exchange 2003 System Management Tools

1. Insert the Exchange 2003 installation CD into your target server.
2. From the Exchange 2003 Setup choose the Custom setup.
3. From the Custom setup screen install only the Exchange System Management Tools.

Installing Exchange 2003 Server Service Pack 1

The following procedure briefly describes how to install Exchange 2003 Server Service Pack 1 on PIMSI Engine machines and Exchange Connector machines.

This task is a step in "Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation" on page 37.

To install Exchange 2003 Server Service Pack 1

1. On the machine where you want to install the software, open a browser window and navigate to the following URL:

   http://www.microsoft.com/downloads/details.aspx?FamilyID=42656083-784d-4e7e-b032-2cb6433bec00&DisplayLang=en

2. Create a folder named SP1 on the machine's local hard disk, or in another network-accessible location.

   (You can either download this software to each machine where you want to install it, or you can download it to one network-accessible location, and install the software from that location for each applicable machine.)

3. Download the E3SP1ENG.exe file into the SP1 folder by clicking the E3SP1ENG.exe link on the Web page.
4. Open the SP1 folder, and then double-click E3SP1ENG.exe.
5. In the Unzip To Folder dialog box, enter the location of the SP1 folder, and then click Unzip.
6. When the self-extraction process is complete, click OK, and then click Close.
7. Run the installation package from the SP1 directory.

Installing MSXML 4.0 SP2 (for Exchange 2003)

The process of installing MXSXML 4.0 SP2 in an Exchange 2003 environment is the same as in an Exchange 2000 environment. For more information about installing MSXML, see "Installing MSXML 4.0 SP2" on page 36.

This task is a step in "Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation" on page 37.

Checking Domain Controller Properties (for Exchange 2003)

The process of checking Domain Controller properties in an Exchange 2003 environment is the same as in an Exchange 2000 environment. For more information, see "Checking Domain Controller Properties" on page 36.

This task is a step in “Process of Preparing Microsoft Exchange 2003 Environment for SSSE Installation” on page 37.

Configuring Firewalls for Use With SSSE

If your SSSE implementation includes firewalls between components, you must open specific ports in the firewall to allow the various parts of the implementation to communicate with each other. This topic briefly describes how to configure your firewall for use with SSSE. This task is a step in “Roadmap for Installing SSSE” on page 33.

Firewall Located Between PIMSI Engine and Exchange Connector

A typical location for a firewall is between a Siebel Server that hosts a PIMSI Engine and a machine that runs the Siebel Exchange Connector. If this is where your firewall is located, have the firewall administrator open the ports listed in Table 10, and configure your Siebel Server to use the same range of ports for DCOM.

Table 10. Ports for a Firewall Located Between PIMSI Engine and Exchange Connector

Traffic Type	Firewall Port to Open
DCOM **NOTE:** DCOM traffic requires the use of actual IP addresses. Firewalls that translate network addresses prevent proper operation. Therefore, Microsoft does not support DCOM calls that are made over Network Address Translation (NAT)-based firewalls. For more information about using DCOM with firewalls, see http://support.microsoft.com/kb/248809/en-us (Article #248809 on the Microsoft Support Web site).	Port range of your choosing, as described in the Microsoft Developer’s Network article called Using Distributed COM with Firewalls (http://msdn2.microsoft.com/en-us/library/ms809327.aspx).
End Point Mapper (EPM)/ Service Control Manager (SCM)	135
LDAP	389
LDAP to Global Catalog Server	3268

Firewall Located Between Exchange Connector and Exchange Server

It is possible (but not recommended) to place a firewall between a machine that runs the Siebel Exchange Connector and the Microsoft Exchange Servers that the Exchange Connector communicates with. In this case, the firewall administrator must open additional ports, such as those as listed in Table 11. On your Siebel Server, be sure to configure corresponding port numbers and port number ranges.

Table 11. Ports for a Firewall Located Between Exchange Connector and Exchange Server

Traffic Type	Firewall Port to Open
End Point Mapper (EPM)/ Service Control Manager (SCM)	135
HTTP	80 or your designated HTTP port
LDAP	389
LDAP to Global Catalog Server	3268
MAPI to Exchange 2000/2003	Values of your choosing, as described in Article #270836 on the Microsoft Support Web site, Exchange Server Static Port Mappings (http://support.microsoft.com/kb/270836/en-us). **NOTE:** As described in this article, you must create registry entries on the Exchange Server machine that specify static MAPI ports.
RPC (Remote Procedure Calls)	Port range of your choosing, as described in Article #154596 on the Microsoft Support Web site, How to Configure RPC Dynamic Port Allocation to Work with Firewalls (http://support.microsoft.com/kb/154596).

Installing Siebel Server for PIMSI Dispatcher

The first part of the SSSE installation process is to install Siebel Enterprise Server software on the machine that will host the PIMSI Dispatcher server component and your Siebel application (such as Siebel Sales).

NOTE: For optimal performance, it is recommended that you run the PIMSI Dispatcher component and the PIMSI Engine component on separate machines.

This task is a step in the process that is outlined in "Roadmap for Installing SSSE" on page 33.

The installation of Siebel Enterprise Server software for PIMSI Dispatcher must have the following characteristics:

- Beginning with the version 7.7 base build, install and configure the Siebel Server components. Select the Custom installation type and make sure you select PIM Server Integration for installation.

  CAUTION: If you do not select PIM Server Integration when you install version 7.7, the installation program does not install SSSE portions of Maintenance Releases and Fix Pack Releases such as 7.7.2 and 7.7.2.3.

- Choose a language that is supported for SSSE. For more information, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.
- After the installation of files is complete, continue following prompts to configure the Siebel Server software components.

For more detailed information about how to perform this task, see *Siebel Installation Guide* for the operating system you are using.

Installing Siebel Server for PIMSI Engine

The next part of the SSSE installation process is to install Siebel Enterprise Server software on the machine that will host the PIMSI Engine server component. This server will be part of the Enterprise you created in "Installing Siebel Server for PIMSI Dispatcher" on page 40.

NOTE: For optimal performance, it is recommended that the PIMSI Dispatcher component and the PIMSI Engine component be run on separate machines.

This task is a step in the process that is outlined in "Roadmap for Installing SSSE" on page 33.

CAUTION: Never install Microsoft Outlook on a machine that will run the Siebel Exchange Connector application, because Outlook overwrites a critical Exchange library with a less functional version.

The installation of Siebel Enterprise Server software for PIMSI Engine must have the following characteristics:

- Beginning with the version 7.7 base build, install and configure the Siebel Server software component on a supported Windows platform. For more information, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb. Select the Custom installation type and make sure you select PIM Server Integration for installation.

  CAUTION: If you do not select PIM Server Integration when you install version 7.7, the installation program does not install SSSE portions of Maintenance Releases and Fix Pack Releases such as 7.7.2 and 7.7.2.3.

- Choose a language that is supported for SSSE. For more information, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.
- After the installation of files is complete, continue following prompts to configure the Siebel Server software component.

- Make a mental note of the Windows User Account Name and Windows User Account Password that you specify. You will need to use the same account name and password later in the configuration process, when you configure the DCOM security settings for the connector application.

For more detailed information about how to perform this task, see *Siebel Installation Guide* for the operating system you are using.

For information about configuring SSSE, after the installation is complete, see Chapter 5, "Configuring Siebel Server Sync."

Installing Siebel Exchange Connector

Siebel Exchange Connector software acts as the liaison between PIMSI Engine and the Microsoft Exchange Server. This topic describes how to install Exchange Connector software. This task is a step in "Roadmap for Installing SSSE" on page 33.

Exchange Connector software can run on the same machine as PIMSI Engine, or it can run on a separate machine that is equipped with the sspicnea.exe executable file and certain SSSE DLLs. Any Exchange Connectors that reside on machines that do not contain PIMSI Engines are known as *remote* Exchange connectors.

When you install PIMSI Engine, Exchange Connector software is automatically installed on the same machine. Whether or not you use the Exchange Connector software on a PIMSI Engine machine depends on later configuration steps.

There is no stand-alone installation available for remote Exchange Connectors. The following procedure describes how to install a remote Exchange Connector.

CAUTION: Never install Microsoft Outlook on a machine that will run the Siebel Exchange Connector application, as Outlook overwrites a critical Exchange library with a less functional version.

To install a remote Exchange Connector

- On a machine that does not contain PIMSI Engine software, follow the installation instructions found in "Installing Siebel Server for PIMSI Engine" on page 41.

  NOTE: For remote Exchange Connector machines, do not enable or run the Siebel Server or PIMSI Engine or PIMSI Dispatcher software that is installed along with the Exchange Connector. Configuration values for the Server, Engine, and Dispatcher can be arbitrary, since the remote Exchange Connector machine will not use them.

For information about configuring Exchange Connectors on PIMSI Engine machines and remote Exchange Connectors, see Chapter 5, "Configuring Siebel Server Sync."

5 Configuring Siebel Server Sync

This chapter provides instructions for configuring SSSE after installation. It includes the following topics:

Process of Configuring SSSE

To configure SSSE, perform the following tasks:

1 "Modifying the Database" on page 44
2 "Modifying the Repository" on page 45
3 "Modifying Seed Data" on page 49
4 "Verifying SSSE Component Definitions" on page 52
5 "Setting Up the Connector Share Directory" on page 56
6 "Configuring Exchange Service Account Credentials" on page 58
7 "Setting System Preferences for SSSE" on page 61
8 "Configuring the Database for SSSE" on page 61
9 "Populating DB_LAST_UPD Columns" on page 63
10 "Configuring the IIS Web Server for Exchange" on page 64
11 "Configuring Exchange Connector Application DCOM Security" on page 65
12 "Designating Trusted Exchange Servers" on page 69
13 "Modifying Log File Settings" on page 70
14 "Configuring the Generic Siebel Organizer" on page 71
15 "Configuring the Default Account" on page 72
16 "Tuning SSSE Siebel Profile Parameters" on page 73
17 "Configuring Exchange Connector Parameters" on page 79
18 "Enabling and Disabling Components on SSSE Servers" on page 84
19 "Restarting Siebel Services" on page 84
20 "Configuring and Starting PIMSI Dispatcher" on page 85

The following configuration task is optional:

- "Setting Exchange Connector Log Levels" on page 86

Modifying the Database

SSSE requires certain database characteristics that were not included in earlier versions of Siebel 7.7 software. The following procedure describes how to modify your Siebel database to make it compatible with SSSE.

To modify your Siebel database for use with SSSE

1. Using the documentation provided by your database manufacturer, set the database server time zone to GMT Greenwich / Monrovia.

   SSSE relies on Server Request Processor and Server Request Broker. For these server components to work correctly, the server must use GMT.

2. Drop the index S_SD_SV_PROFILE_F1.

   If this index is not dropped, later parts of the configuration process will fail.

   If this index is dropped, as described here, it is recreated automatically as part of later configuration operations.

Modifying the Repository

SSSE requires certain repository characteristics that were not included in earlier versions of Siebel 7.7 software. You must modify the repository, then compile and deploy a new Siebel Repository File (SRF).

In order to modify the repository correctly, you must check out certain projects in Siebel Tools, and then import certain SIF files. Table 12 lists these projects and files for your reference as you carry out the procedure that follows.

Table 12. SIF Files to Import and Associated Projects to Check Out

SIF File Name	Projects to Check Out Before Importing SIF	Comments
7722-SSSE-HOR-Base.sif	■ Table Activity ■ Table Employee ■ Table Opty ■ Table Organization ■ Table Party ■ Table Person ■ Table Project ■ Table Service Request	Adds the DB_LAST_UPD column to tables and adds or updates some indexes in the Siebel Business Applications database.
7722-SSSE-SIA-Base.sif	■ Table Activity ■ Table Employee ■ Table Opty ■ Table Organization ■ Table Party ■ Table Person ■ Table Project ■ Table Service Request	Adds the DB_LAST_UPD column to tables and adds or updates some indexes in the Siebel Industry Applications database.
7722-SSSE-ServerDomain.sif	■ Table ServerDomain	Makes data model changes to SSSE objects.
7722-SSSE-Objects.sif	■ PIM Server Integration ■ PIM Server Integration (UI) ■ PIM Server Integration Engine ■ PIM Server Integration Workflows ■ PIM Server Integration Workflows Level2	Updates existing and creates new SSSE repository objects for the Siebel Business Applications database.
7722-SSSE-SIA-Objects.sif	■ PIM Server Integration ■ PIM Server Integration (UI) ■ PIM Server Integration Engine ■ PIM Server Integration Workflows ■ PIM Server Integration Workflows Level2	Updates existing and creates new SSSE repository objects for the Siebel Industry Applications database.

Importing these SIF files causes changes in certain database tables. For information about which tables are changed by which SIF files, see Table 13. You will need this information during the procedure that follows.

Table 13. Tables That SIF Files Change

SIF File Name	Changed Tables
7722-SSSE-HOR-Base.sif and 7722-SSSE-SIA-Base.sif	■ S_ACT_CONTACT ■ S_ACT_EMP ■ S_ADDR_ORG ■ S_ADDR_PER ■ S_CONTACT ■ S_CONTACT_BU ■ S_CONTACT_INFO ■ S_EVT_ACT ■ S_OPTY ■ S_ORG_EXT ■ S_PARTY ■ S_POSTN ■ S_POSTN_CON ■ S_PROJ ■ S_SRV_REQ ■ S_USER
7722-SSSE-ServerDomain.sif	■ S_SD_EXCH_STATE ■ S_SD_PIM_ROW ■ S_SD_SRCKEY ■ S_SD_STATE_DATA ■ S_SD_SV_PROFILE ■ S_SD_SYNC_INFO ■ S_SD_USERMAP_TS ■ S_SD_USER_MAP ■ S_SD_USR_ACCESS ■ S_SVRDOMAIN_EXT

The following procedure briefly describes how to modify your Siebel repository to make it compatible with SSSE.

NOTE: Several steps in the following procedure require you to overwrite object definitions in the repository. This is necessary because SSSE requires that you remove some parameters from the SRF.

To modify your Siebel repository for use with SSSE

1. In Siebel Tools, check out the appropriate projects, and then import one of the following SIF files:
   - For Siebel Business Applications, import the file 7722-SSSE-HOR-Base.sif
   - For Siebel Industry Applications, import the file 7722-SSSE-SIA-Base.sif

   For conflict resolution, select Merge. This will preserve any customizations you have made to your tables. If you have not customized your tables, you can select Overwrite the object definition in the repository, instead. For the list of projects that must be checked out for the SIF import to succeed, see Table 12 on page 46.

2. Check out the appropriate projects, and then import the SIF file 7722-SSSE-ServerDomain.sif.

   For conflict resolution, select Overwrite the object definition in the repository. For the list of projects that must be checked out for the SIF import to succeed, see Table 12 on page 46.

3. Make sure there are no Siebel Servers running against the database.

   If servers are running, there will be errors in the next step because the tables that need to be changed will still be in use.

4. Apply the database table changes by using the Siebel Tools Apply feature.

   To use the feature, query for all changed tables, and then apply the changes to the entire query (select Current for the tables in the dialog). Make sure that all tables listed in Table 13 on page 47 are listed in the query results or other steps in the configuration may fail.

   If not all of the tables appear in your query, manually apply the database changes for each of the tables listed in Table 13 on page 47 by selecting each table and clicking Apply.

   For more information about applying changes in Siebel Tools, see *Configuring Siebel eBusiness Applications*.

5. Check out the appropriate projects, and then import one of the following SIF files:
   - For Siebel Business Applications, import the file 7722-SSSE-Objects.sif
   - For Siebel Industry Applications, import the file 7722-SSSE-SIA-Objects.sif

   For conflict resolution, select Overwrite the object definition in the repository. For the list of projects that must be checked out for the SIF import to succeed, see Table 12 on page 46.

6. Compile the SRF.

   Be sure to check out the new PIM Server Integration Extract Only project and include it among the projects you select before compiling.

7 Deploy the new SRF to your Siebel Servers.

NOTE: If you are applying 7722-SSSE-HOR-Base.sif in a Microsoft SQL database, certain errors are common—Microsoft SQL servers have an 8K page size and they report errors if any rows that have all columns populated will not be stored. You can ignore the following errors unless you intend to populate all columns in these tables:

- 01000 (1708): [Microsoft][ODBC SQL Server Driver][SQL Server]Warning: The table 'S_ORG_EXT' has been created but its maximum row size (12201) exceeds the maximum number of bytes per row (8060). INSERT or UPDATE of a row in this table will fail if the resulting row length exceeds 8060 bytes.
- 01000 (1708): [Microsoft][ODBC SQL Server Driver][SQL Server]Warning: The table 'S_EVT_ACT' has been created but its maximum row size (9513) exceeds the maximum number of bytes per row (8060). INSERT or UPDATE of a row in this table will fail if the resulting row length exceeds 8060 bytes.

Modifying Seed Data

SSSE requires changes to the seed data that was included in earlier versions of Siebel 7.7 software.

CAUTION: It is important to remove obsolete seed data before importing new seed data. Failure to remove obsolete seed data can result in unpredictable software behavior.

The following three procedures describe how to modify your seed data to make it compatible with SSSE. Perform these procedures in the order shown here.

To remove obsolete seed data before configuring SSSE

1. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > PIM Domains.
2. In the PIM Domains list, select each of the following records and then click Delete.
   - Batch Extract
   - Exchange Source Key Domain
3. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Configuration.
4. In the PIM Server Integration Configuration list, select Queue Configuration Template and then click Delete.
5. Click the LOV Translation tab.

6 In the LOV Translation list, select each of the records that are listed in the following table, and then click Delete.

Name	PIM Value
Country	■ United States Of America
Exchange Time Zone*	■ Abu Dhabi, Muscat ■ Adelaide, Central Australia ■ Almaty, Novosibirsk ■ Athens, Istanbul, Minsk ■ Bangkok, Hanoi, Jakarta ■ Brisbane (4 items) ■ Bucharest ■ Buenos Aires, Georgetown ■ Caracas, La Paz ■ Baku, Tbilisi, Yerevan ■ Eniwetok, Kwajalein ■ Fiji, Kamchatka, Marshall Is. ■ Greenwich Mean Time - Dublin, Edinburgh, London (2 items) ■ Helsinki, Riga, Tallinn ■ Irkutsk, Ulaan Bataar ■ Islamabad, Karachi, Tashkent ■ Kolkata, Chennai, Mumbai, New Delhi ■ Kuala Lumpur, Singapore (4 items) ■ Magadan, Solomon Is., New Caledonia ■ Midway Island, Samoa ■ Moscow, St. Petersburg, Volgograd ■ Osaka, Sapporo, Tokyo (2 items) ■ Pacific Time (US & Canada), Tijuana (2 items) ■ Sarajevo, Skopje, Sofija, Vilnius, Warsaw, Zagreb (8 items) ■ Wellington, Auckland

To import required seed data for use with SSSE

1 From the application-level menu, select Navigate > Site Map > Administration - Integration > Data Map Editor, and then perform the following substeps:

  a In the Integration Object Map list, click the Menu button and select Import Data Map.

  b In the EAI EAI Import dialog box, enter the file name SSSE_Data_Maps.XML and then click Import.

2 From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Siebel Domains, and then perform the following substeps:

  a In the Siebel Domains list, click the Menu button and select Import Siebel Domain.

  b In the PIM Server Integration Import dialog box, enter the file name SSSE_Siebel_Domain.XML and then click Import.

  c In the Siebel Domains list, select a domain, and then click Sync Fields in the Siebel Domain Fields list.

  Repeat this step for each Siebel Domain record.

3 From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > PIM Domains, and then perform the following substeps:

  a In the PIM Domains list, click the Menu button and select Import PIM Domain.

  b In the PIM Server Integration Import dialog box, enter the file name SSSE_PIM_Domain.XML and then click Import.

4 From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Domain Map, and then perform the following substeps:

  a In the Domain Map list, click the Menu button and select Import Domain Map.

  b In the PIM Server Integration Import dialog box, enter the file name SSSE_Domain_Map.XML and then click Import.

5 From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Configuration > PIM Server Integration Configuration, and then perform the following substeps:

  a In the PIM Server Integration Configuration list, click the Menu button and select Import Configuration.

  b In the PIM Server Integration Import dialog box, enter the file name SSSE_Server_Config.XML and then click Import.

6 Click the LOV Translation tab, and then perform the following substeps:

  a In the LOV Translation list, click the Menu button and select Import Translation.

  b In the PIM Server Integration Import dialog box, enter the file name SSSE_PIM_Translation.XML and then click Import.

To add seed data Lists of Values (LOVs) for use with SSSE

1 From the application-level menu, select Navigate > Site Map > Administration - Data > List of Values.

2 In the List of Values list, click New to create a new record, and complete the fields as described in the following table.

Repeat this step as needed to create all the records shown in the table. For general information about creating LOV records, see *Applications Administration Guide*.

Type	Display Value	Translate	Language-Independent Code	Parent LIC Code
LOV_TYPE	PIMSI_VISIBILITY	N	PIMSI_VISIBILITY	
PIMSI_VISIBILITY	PersonalContact	N	PersonalContact	
PIMSI_VISIBILITY	Business Contact	N	Business Contact	
PIMSI_VISIBILITY	Employee	N	Employee	
PIMSI_VISIBILITY	Calendar	N	Calendar	
PIMSI_VISIBILITY	Task	N	Task	
PIMSI_VISIBILITY	Sales Rep	N	Sales Rep	Business Contact
PIMSI_VISIBILITY	All	N	All	Business Contact
PIMSI_VISIBILITY	Personal	N	Personal	Calendar
PIMSI_VISIBILITY	Personal	N	Personal	Task
PIMSI_VISIBILITY	Personal	N	Personal	PersonalContact[1]

1. Note that there is no space in the PersonalContact language-independent code or display value.

Verifying SSSE Component Definitions

SSSE uses two server components, PIMSI Engine and PIMSI Dispatcher. The following procedure describes how to configure these components correctly. This task is a step in "Process of Configuring SSSE" on page 44.

To verify server component definitions

1 From the Siebel application menu, choose Navigate > Site Map > Administration - Server Configuration > Enterprises > Component Definitions.

2 In the Component Definitions list, use standard query techniques to locate records where Component matches PIMSI*.

3 If records exist with aliases of PIMSIEng or PIMSIDispatcher, select these records and click Delete.

4 In the Component Definitions list, click New to create a new record, and complete the fields as described in the following table.

Field	Value
Component	PIMSI Dispatcher
Alias	PIMSIDispatcher
Component Type	PIMSI Engine Service (with Batch as the Runtime value) **NOTE:** Once the record is saved, this value automatically changes to Business Service Manager.
Component Group	PIM Server Integration Management

5 With the PIMSI Dispatcher record selected in the Component Definitions list, set the following values in the Component Parameters list:

For more information about the Maximum Tasks parameter, see "About Tuning SSSE for Optimal Performance" on page 55.

Parameter	Value
Business Service Name	PIMSI Engine Service
Method Name	GenerateExtractReqMsgs
Maximum MT Servers	1 **CAUTION:** If Maximum MT Servers is set to a greater value than 1, unpredictable results may occur.
Maximum Tasks	10
Key Based Enabled	TRUE
Application Repository File	■ For Siebel Business Applications, enter siebel.srf ■ For Siebel Industry Applications, enter siebel_sia.srf

6 In the Component Definitions list, click New to create a new record, and complete the fields as described in the following table.

Field	Value
Component	PIMSI Engine
Alias	PIMSIEng

Field	Value
Component Type	PIMSI Engine Service (with Batch as the Runtime value) **NOTE:** Once the record is saved, this value automatically changes to Business Service Manager.
Component Group	PIM Server Integration Management

7 With the PIMSI Engine record selected in the Component Definitions list, set the following values in the Component Parameters list:

Parameter	Value
Business Service Query Access	SSSE Address Parser (eScript)
Business Service Name	PIMSI Engine Service
Method Name	BusSvcMgrInit
Maximum MT Servers	1
Maximum Tasks	10
Application Repository File	■ For Siebel Business Applications, enter siebel.srf ■ For Siebel Industry Applications, enter siebel_sia.srf

NOTE: The Siebel database and Exchange differ in how they store addresses. The Business Service Query Access parameter specifies the name of the script that will be used to combine two Siebel address field values when transmitting address data to Exchange, and split one Exchange address field value into two values when transmitting address data to the Siebel database.

8 From the Siebel application menu, choose Navigate > Site Map > Administration - Server Configuration > Enterprises > Component Definitions.

9 In the Component Definitions list, use standard query techniques to locate records where Component matches PIMSI*.

10 For each of the components PIMSIDispatcher and PIMSIEng, select the component record, and then click Enable.

11 In the Component Definitions list, select PIMSIDispatcher and PIMSIEng, and then click Synchronize.

12 When synchronization is complete, verify that the PIMSI Dispatcher component and the PIMSI Engine component exist.

13 On the machine that hosts the PIMSI Dispatcher component, restart the Siebel Server.

For information about restarting Siebel Servers, see *Siebel System Administration Guide*.

14 On the machine that hosts the PIMSI Engine component, restart the Siebel Server.

About Tuning SSSE for Optimal Performance

In general, SSSE works well when you configure your Siebel implementation using the scalability and sizing recommendations that are discussed in *Siebel Performance Tuning Guide*. For example, you can set server component parameters such as MaxMTServers and MinMTServers parameters to the values that suit your implementation as a whole, without especially considering SSSE performance issues. However, this topic discusses some configuration recommendations that are particularly important for ensuring optimum performance for SSSE. You will need this information in order to make the best use of two other topics in this chapter: "Verifying SSSE Component Definitions" on page 52 and "Configuring Exchange Connector Parameters" on page 79.

In an SSSE implementation, two key parameters are MaxUsers and MaxTasks (also called Maximum Tasks). MaxUsers is an Exchange Connector parameter; MaxTasks is a PIMSI Engine server component parameter.

MaxUsers

The MaxUsers parameter defines the maximum number of users that can be assigned to each instance of the Exchange Connector. You may want to modify the value of this setting depending on whether your Siebel implementation will be adding many new SSSE users in the near future:

- **If you need to add many new** SSSE **users,** it is recommended that you set the MaxUsers parameter to a very low value, perhaps even the minimum value of 1. This is because all users of an Exchange Connector instance compete for the instance's single communication channel to the Exchange Server. Ongoing synchronizations rarely take long enough to cause problematic delays for other users of the same Connector instance, but initial extracts can monopolize a Connector's communication channel for significant time periods. To prevent any user's synchronization from ever being delayed while another user's initial extract completes, you can set MaxUsers to a value of 1, meaning that there is a dedicated Exchange Connector instance for each user being synchronized.

  NOTE: This configuration uses a comparatively large amount of memory on the machines that run Exchange Connector instances—each instance uses about 25 MB of memory.

- **If you add few new** SSSE **users,** you can set the MaxUsers parameter to a higher value. This uses less memory for Connector instances, at the risk of occasional synchronization delays when an initial extract is in progress.

MaxTasks

The MaxTasks setting controls the total number of users who are synchronized at one time. The value you choose for MaxTasks can limit the total number of Connector instances that run at any one time, preventing the Connector machines from getting overloaded.

Selecting and Testing MaxUsers and MaxTasks Values

The exact settings to use for your implementation depend on the hardware you use. Each Connector instance uses about 25 MB of memory. As an example, if you have between 1 and 2 GB of memory available for Connector instances to use, you could set MaxUsers to 1 and set MaxTasks to 50.

Perform some initial extract test runs to assess the amount of CPU and memory that are used with your initial parameter settings. Check the Connector machines and the Siebel Servers where your PIMSI Engine components are running. If you have ample CPU and memory still available, you can try increasing the value of MaxTasks.

At a later time, if initial extracts become comparatively rare, you may find that you obtain better performance by setting MaxUsers to a higher value.

Choosing an Appropriate Dispatcher Repeat Interval

When you are satisfied with your MaxUsers and MaxTasks setting values, you may want to measure how quickly SSSE can process your entire population of ongoing SSSE users. You can use the information to adjust the values of the Repeating Info settings for the PIMSI Dispatcher job, so that the Dispatcher runs at an interval of your choosing. The optimum interval is one that is longer than the length of time needed for the Dispatcher to process your ongoing SSSE users. The easiest way to ensure this is to set Repeat From to a value of End, meaning that each Dispatcher cycle is started at a specific interval after the end of the previous cycle. If you prefer, you can set Repeat From to Start, instead. In that case, it is recommended that you set Repeat Interval to a value that is greater than the length of time needed for the Dispatcher to process your current ongoing users.

For more information about setting up PIMSI Dispatcher jobs, see "Configuring and Starting PIMSI Dispatcher" on page 85.

Setting Up the Connector Share Directory

In SSSE's modular architecture, the Exchange Connector module provides the interface through which the PIMSI Engine communicates with an Exchange server. For the Siebel-provided Exchange connector, installation-specific configuration is required.

A portion of the Exchange Connector is a COM (Component Object Model) application. SSSE starts COM applications as needed. COM applications can run on any machine that hosts the Exchange Connector software, including any machine that hosts the PIMSI Engine component. For a COM application to function correctly, you must create a local shared directory on the machine where the COM application will run. The security and permissions for the shared directory should be configured to give the user account that runs PIMSI Engine full access rights to the directory. This user is sometimes called the SSSE *startup user.* For more information about security requirements for COM applications, see "Configuring Exchange Connector Application DCOM Security" on page 65.

Perform the following tasks to create a shared directory, and then register its location with SSSE.

You must create a shared directory on each machine that will run the Exchange Connector applications, and then register the location of the shared directory with SSSE, as described in the following procedures. These tasks are steps in "Process of Configuring SSSE" on page 44.

To create the shared connector directory

1. On each machine where the Exchange Connector is installed, create a new folder.

   The folder name can be any name you choose.

2. Right-click the folder, and choose Sharing and Security.
3. In the Properties dialog box, select Share This Folder and enter a share name.
4. Click Permissions to display the Permissions for <*ShareName*> dialog box.
5. Click Add and enter the user name that the PIMSI Engine component runs under.

   If you want to increase security, also select Everyone and click Remove.

6. Click OK to display the Properties dialog box, and click the Security tab.
7. Enter the user name that the PIMSI Engine component runs under.

   If you want to increase security, also select Everyone and click Remove.

8. Click OK twice.

To register the shared directory with SSSE

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Configuration > PIM Server Integration Configuration.
2. In the PIM Server Integration Configuration list, select the Exchange 2000 Connector record.
3. In the Configuration Parameters list, click New, and then complete the fields as described in the following table.

Field	Value
Section	Engine Shares
Parameter	Share*n* (where *n* is a unique number for each shared directory)
Value	<*share pathname*> (Example: `\\`*`MachineName`*`\`*`ShareName`*`,` `where` *`MachineName`* `is the name of the Connector machine and` *`ShareName`* `is the name designating the shared directory.)`

4. Repeat Step 3 for each shared directory that you created. Increment the Parameter value to match the instance of the Exchange Connector software.

   For example, use either *Share1* or *Share01* for the first Exchange Connector instance, and *Share2* or *Share02* for the second Exchange Connector instance, and so on.

5. Restart the Siebel Servers on your PIMSI Dispatcher and PIMSI Engine machines.

   For information about restarting Siebel Servers, see *Siebel System Administration Guide*.

About Exchange Service Account Privileges

The Exchange Connector requires certain privileges in order for SSSE to function properly. This topic describes the necessary privileges.

The user name that the Exchange Connector runs under (the Exchange service account) must have administrative privileges including read/write access to the Exchange mailboxes of all users who will synchronize using SSSE. The account must be a domain account, not a local account.

You need only one Exchange service account for your whole Exchange infrastructure, regardless of how many Exchange servers you have. Exchange servers are not listed in the Siebel database. Instead, the Exchange Connector queries the Active Directory Global Catalog at runtime to determine which Exchange Server handles the mailbox for a given user (SMTP email address).

The Exchange service account can be administered entirely by your Windows administrators. Siebel administrators do not need to know the login credentials for the Exchange service account.

To manage the process of giving the Exchange service account read/write access to SSSE user mailboxes, you can use a script that gathers information about the applicable users from the Siebel User Map view. For more information about the script, see "Configuring Exchange Service Account Credentials" on page 58. Alternately, you can place all Exchange mailboxes for SSSE users on one or more designated Exchange servers, and give the connector read/write access at the server level, but this approach is not recommended if Exchange user mailboxes are frequently moved between Exchange Servers.

NOTE: For proper operation of SSSE, each user to be synchronized must have an activated Exchange mailbox. The Exchange service account must also have an activated Exchange mailbox.

Configuring Exchange Service Account Credentials

The Exchange Connector uses the credentials of the user name it runs under to interact with all of the Exchange mailboxes in the Active Directory *forest* (one or more Active Directory domains that share certain characteristics and information). This user is required to have an activated Exchange mailbox account. Additionally, this user must have special mailbox access privileges in order to access other users' activated Exchange mailboxes. For more information about these privileges, see "About Exchange Service Account Privileges" on page 58.

The task of configuring these credentials is a step in "Process of Configuring SSSE" on page 44.

Before you configure the credentials for your Exchange service account, use the following procedure to check whether your account will need Send As privileges in addition to full mailbox access. Some versions of Microsoft Exchange implicitly grant Send As privileges along with full mailbox access, and other versions do not. The Exchange service account needs either implicit or explicit Send As privileges.

Determining whether to grant Send As privileges to your Exchange service account

1 Determine which version of Microsoft Exchange your Exchange server is running, and complete the appropriate following substep:

- **For Microsoft Exchange 2003**, review Article #895949 on the Microsoft Support Web site, “Send As” permission behavior change in Exchange 2003 (http://support.microsoft.com/kb/895949).

- **For Microsoft Exchange 2000**, review Article #915358 on the Microsoft Support Web site, A hotfix is available to change the behavior of the Full Mailbox Access permission in Exchange 2000 Server (http://support.microsoft.com/kb/915358/).

2 Determine which version of Store.exe your Exchange server is running.

- For Microsoft Exchange 2000 Server Service Pack 3 (SP3) and Store.exe version 6619.4 or higher, plan to grant your Exchange service account explicit Send As privileges.

- For Microsoft Exchange Server 2003 Service Pack 1 and Store.exe file version of 7233.51 or higher, plan to grant your Exchange service account explicit Send As privileges.

You will use this information in a later procedure.

The following procedures describe two ways of configuring the necessary credentials: a method that uses a script, and a manual method.

- **Script Method.** The method that uses a script is recommended if you need to provide the Connector application with access to many users’ mailboxes, as would be typical during deployment of SSSE. However, if you need to grant Send As privileges explicitly, you may need to modify the script that is supplied by Oracle. For more information about Send As privileges in various versions of Microsoft Exchange, see one or both of the articles that are listed in Step 1.

- **Manual Method.** The manual method is recommended if you only need to grant access to a few users’ mailboxes, such as when you want to enable synchronization for a few new employees.

NOTE: You can run the Exchange Connector application under the same user as the PIMSI Engine component, or under a different user. Using different users separates Siebel security settings and Exchange security settings as much as possible.

Configuring Credentials Using a Script

The following procedure uses the ssse_exchange2k3_permissions.vbs script to configure the security settings that grant access to other users’ mailboxes for the user that the Exchange Connector application runs under.

To configure Exchange service account credentials using a script

1 Verify that the user that the Exchange Connector will run under has an activated mailbox on the Exchange server, or create and activate one if necessary.

2 Log in to your Siebel application as an administrator and navigate to Site Map > Administration - PIM Server Integration > Sync Access Control > User Map.

3 In the User Map list, verify that the column names appear in the following order:

- Siebel User Login

- PIM Server Type
- PIM User Identifier
- Language
- Sync Enabled

If necessary, use the Columns Displayed command to adjust the order of the columns.

4 In the User Map list, select the users who will use SSSE, and then click the menu button and select Export.

5 In the Export dialog box, choose settings as described in the following table, and then click Next.

Setting	Value
Rows to Export	All Rows in Current Query
Columns to Export	Visible Columns
Output Format	Comma Separated Text File

6 In the File Download dialog box, click Save and then use standard Windows techniques to select an output file name and location.

7 In the Export dialog box, click Close.

8 Use a text editor to open the file you saved, remove the column names, and then save the file using the ANSI encoding option.

9 Follow the directions documented in the following script file, where *install_directory* is the installation directory for your Siebel implementation:

install_directory\siebsrvr\bin\ssse_exchange2k3_permissions.vbs

Configuring Credentials Manually

The following procedure describes how to manually configure the security settings that grant access to other users' mailboxes for the user that the Exchange Connector application runs under.

To configure Exchange service account credentials manually

1 Verify that the user that the Exchange Connector application runs under has a mailbox on the Exchange server, or create one if necessary.

2 On any machine that has the Exchange System Management Tools installed (for example, the Exchange Server or any Siebel Exchange Connector machine), start the Active Directory Users and Computers console.

3 From the View menu, select Advanced Features.

4 In the Tree pane, select Users.

5 Perform the following substeps:

a In the Users pane, right-click the user name and choose Properties.

b. In the user's Properties dialog box, click the Exchange Advanced tab.

c. On the Exchange Advanced tab, click Mailbox Rights.

d. In the Permissions for *USERNAME* dialog box, click Add and enter the user that SSSE is running under.

e. Click Check Names.

   If there is no error message, click OK to return to the Permissions for *USERNAME* dialog box.

   If there is an error message, correct the user name before continuing.

f. In the Names list, make sure the user is selected.

g. In the Permissions list, select the Allow check box for Full mailbox access.

h. If your version of Microsoft Exchange and Store.exe do not grant Send As privileges implicitly with Full mailbox access, then also select the Allow check box for Send As.

6. Click OK twice to close the dialog boxes and put the Properties changes into effect.

7. Repeat Step 5 and Step 6 for each user who will use SSSE.

Setting System Preferences for SSSE

The following procedure describes how to set a system preference that SSSE requires.

This task is a step in "Process of Configuring SSSE" on page 44.

To set system preferences for use with SSSE

1. Log in to your Siebel application as an administrator and navigate to Site Map > Administration - Application > System Preferences.

2. In the System Preferences list, select Universal Time Coordinated, and then enter TRUE in the System Preference Value field.

Configuring the Database for SSSE

The next stage in configuring SSSE is to configure database triggers for SSSE, as described in the following paragraphs.

This task is a step in "Process of Configuring SSSE" on page 44.

Activating SSSE Database Triggers

SSSE relies on database triggers to guarantee correct operation. These triggers are not related to Siebel workflows, but are native to and supported by the database. The following procedure briefly describes how to install the triggers.

NOTE: After each use of the Generate Triggers server component, you must reinstall the database triggers for SSSE, as described in this topic. (The GenTrig component removes all Siebel triggers on the database.)

CAUTION: SSSE also includes triggers for position change, synchronization level change, and visibility change. Do not change triggers in these areas without consulting with Siebel Expert Services or Siebel Professional Services.

To install database triggers

1. On either your PIMSI Dispatcher machine or your PIMSI Engine machine, use the Windows Explorer to navigate to *install_directory*\siebsrvr\bin, where *install_directory* is the installation directory for your Siebel implementation.
2. Locate the SSSE_trigger_*database_platform*.sql script that is appropriate for your database, as shown in the following table.

Database Platform	Script File Name
IBM DB2 – Using Unicode	ssse_triggers_db2.sql
IBM DB2/390	ssse_triggers_db2_390.sql
IBM DB2 – Using Code Page	ssse_triggers_db2_cp.sql
Microsoft SQL Server	ssse_triggers_mssql.sql
Oracle 8i	ssse_triggers_ora8.sql
Oracle 9i or Oracle 10g	ssse_triggers_ora9.sql

3. Use any text editor to modify the SQL script to replace the <change me> tags with the correct name space for your database.
4. To enable the SSSE triggers in your environment, use the appropriate database utility for your database platform to execute the script against your database.

Populating DB_LAST_UPD Columns

If your Siebel implementation uses an Oracle or DB2/UDB database, then SSSE performance optimization requires that you place data in the DB_LAST_UPD column of each of the Siebel tables listed in Table 14 on page 63. These columns were added to the listed tables specifically for use by SSSE. When SSSE makes queries related to these new columns, Oracle and DB2/UDB database optimizer performance improves if the columns contain data.

Table 14. Database Tables and Indexes that Affect SSSE Performance

Table	Index
S_ACT_CONTACT	S_ACT_CONTACT_M1(DB_LAST_UPD,ACTIVITY_ID)
S_ACT_EMP	S_ACT_EMP_M5(DB_LAST_UPD,ACTIVITY_ID)
S_ADDR_ORG	S_ADDR_ORG_M7(DB_LAST_UPD,ROW_ID)
S_ADDR_PER	S_ADDR_PER_M6(DB_LAST_UPD,ROW_ID)
S_CONTACT	S_CONTACT_M23(DB_LAST_UPD,PAR_ROW_ID)
S_CONTACT_BU	S_CONTACT_BU_M3(DB_LAST_UPD,CONTACT_ID)
S_CONTACT_INFO	S_CONTACT_INFO_M1(DB_LAST_UPD, SYNC_FLG,TARGET_PER_ID)
S_EVT_ACT	S_EVT_ACT_M12(DB_LAST_UPD,ROW_ID
S_OPTY	S_OPTY_M10(DB_LAST_UPD,ROW_ID)
S_ORG_EXT	S_ORG_EXT_M23(DB_LAST_UPD,PAR_ROW_ID)
S_PARTY	S_PARTY_M5(DB_LAST_UPD,ROW_ID)
S_POSTN	S_POSTN_M4(DB_LAST_UPD,PAR_ROW_ID)
S_POSTN_CON	S_POSTN_CON_M4(DB_LAST_UPD,CON_ID)
S_PROJ	S_PROJ_M9(DB_LAST_UPD,ROW_ID)
S_SRV_REQ	S_SRV_REQ_M12(DB_LAST_UPD,ROW_ID)
S_USER	S_USER_M3(DB_LAST_UPD,ROW_ID)

The following procedure briefly describes how to populate these columns with the recommended data.

NOTE: This task is highly recommended for Siebel implementations that use Oracle or DB2/UDB databases. This task is not needed for Siebel implementations that use other database types.

To populate DB_LAST_UPD columns with data

1 For each Siebel table that is listed in Table 14 on page 63, use one of the following methods to place data in the DB_LAST_UPD column of at least some rows:

- Run a database script to copy the value of the LAST_UPD system field into the DB_LAST_UPD field of the same record, then update your database statistics.
- If you are working in a Test environment where Contact, Calendar, and To Do records are being modified as part of testing, enable database triggers for a time period that is long enough to capture some changes in all of the tables listed in Table 14 on page 63 (for example, perhaps one week), and then update your database statistics.

  For more information about enabling these database triggers, see "Configuring the Database for SSSE" on page 61.

2. After you have used a script or database triggers to populate the DB_LAST_UPD columns with data, update your database statistics and then modify your database optimizer so that it is forced to consider the DB_LAST_UPD indexes.

   NOTE: It is not possible to force a Microsoft SQL Server database optimizer to consider DB_LAST_UPD indexes.

Configuring the IIS Web Server for Exchange

SSSE has certain configuration requirements for the Internet Information Services (IIS) Web server where the Exchange Server resides. This topic describes how to meet those requirements.

This task is a step in "Process of Configuring SSSE" on page 44.

The Siebel Exchange Connector uses the WWW Distributed Authoring and Versioning (WebDAV) extension to HTTP to perform calendar operations. The Secure Socket Layer protocol (SSL, which uses URLs that start with https:) is not supported. If the Web Server for Exchange is set up to require authentication, then you must either set up the Exchange Connector application to run using the security context of a user that the Web Server authentication will accept as valid, or else reconfigure the Web Server to allow anonymous access.

If you have the urlscan product installed, make sure that the urlscan.ini file (typically located at `C:\WINNT\system32\inetsrv\urlscan\urlscan.ini`) is set up to allow the following:

- Make sure that urlscan allows for the following verbs:
  - PROPPATCH
  - PROPFIND
  - GET
  - DELETE
- Make sure the Web server allows the HTTP request header Translate.
- If you want SSSE to synchronize Outlook-created calendar items that contain periods in the Subject field, then make sure AllowDotInPath is set to 1. This directs the Web server to accept URLs that contain periods in them. This setting is relevant because SSSE uses WebDAV to interact with Exchange Calendar records. This kind of interaction requires WebDAV to specify a URL that includes a file name that is based on the text of the Subject for the calendar item.

- Make sure that [DenyUrlSequences] is configured appropriately for your requirements. For example, if you want to allow Outlook-created items with ".." in the Subject, you must comment out the ".." line in the urlscan.ini file. You can comment out a line in the file by placing a semi-colon (;) at the beginning of the line.

- If Web server logging options are turned on, log files are typically located in `C:\WINNT\system32\inetsrv\urlscan\logs`. When the Web server rejects a URL because it does not meet the criteria specified in the .ini file, Exchange Connector log files record the rejected URL. You can use the URL from the Connector log file to find entries in the Web server log file that will help you to determine why the URL was rejected. For example, the following error indicates that urlscan is configured to reject PROPPATCH requests:

  ```
  [06-03-2004 - 17:31:36] Client at 172.20.63.233: Sent verb 'PROPPATCH', which
  is not specifically allowed. Request will be rejected.
  ```

  The following error indicates that urlscan is configured to reject the Translate request header:

  ```
  [06-03-2004 - 23:20:45] Client at 172.20.63.221: URL contains disallowed
  header 'translate:' Request will be rejected.  Site Instance='1', Raw URL='/
  exchange/pimsi2202/Calendar/WzkBF100800142102ibndtst81.eml'
  ```

  NOTE: Note the URL contains the user ID which may be useful for debugging purposes.

Configuring Exchange Connector Application DCOM Security

After installing the database triggers, you must configure DCOM security settings for the following applications on each machine where the Siebel Exchange Connector will run:

- **SSPICNEA.** The sspicnea application is the Exchange Connector application that synchronizes data in Exchange user mailboxes.
- **SSPICNFM.** The sspicnfm application is the file moniker application, which allows PIMSI Engine instances to work with Exchange Connector application instances.

This task is a step in "Process of Configuring SSSE" on page 44.

If you are already familiar with DCOM settings, you may find it helpful to consult Table 15 and Table 16 on page 66. The procedure that follows these tables provides detailed instructions for configuring the individual settings.

Table 15. DCOM Configuration Settings for SSPICNEA (Exchange Connector Application)

Security Setting	Required by Users	Explanation
Allow Access	PIMSI Engine user and Exchange Connector user	Both PIMSI Engine processes and SSPICNFM processes make RPC calls to methods in SSPICNEA.

Table 15. DCOM Configuration Settings for SSPICNEA (Exchange Connector Application)

Security Setting	Required by Users	Explanation
Allow Launch	Exchange Connector user	SSPICNFM has the identity of the Exchange Connector user. SSPICNFM launches SSPICNEA.
Identity	Exchange Connector user	The Exchange Connector user is the user that SSPICNEA runs as. This user also has access rights for the Exchange mailboxes.

NOTE: The Exchange Connector application, SSPICNEA, makes RPC calls to the PIMSI Engine. Therefore, all PIMSI Engine machines must grant default DCOM security access to the Exchange Connector user. Procedures for granting this access follow the procedure for configuring Exchange Connector DCOM settings, later in this topic.

Table 16. DCOM Configuration Settings for SSPICNFM (File Moniker Application)

Security Setting	Required by Users	Explanation
Allow Access	PIMSI Engine user	PIMSI Engine processes run as PIMSI Engine user. PIMSI Engine makes RPC calls to methods in SSPICNFM.
Allow Launch	PIMSI Engine user	PIMSI Engine launches SSPICNFM.
Identity	Exchange Connector user	Connector components run as the Exchange Connector user.

To configure Exchange Connector application DCOM security

1. On each machine where you have installed Exchange Connector software and where you plan to run the Exchange Connector applications, from the Windows Start menu, choose Run, enter dcomcnfg.exe, and then click OK.

   Depending on the version of dcomcnfg.exe that you run, you may need to navigate within the dcomcnfg.exe application to a location such as Console Root > Component Services > Computers > My Computer > DCOM Config.

   If one or more DCOM Configuration Warnings are displayed, click No.

2. In the Distributed COM Configuration Properties dialog box, on the Applications tab, select sspicnea, and then click Properties.

   If your version of dcomcnfg.exe does not display an Applications tab, select the sspicnea application in the right pane, and then right-click and choose Properties.

3. On the General tab of the Properties dialog box, verify the following:

   - That Application type is set to local server

- That the local path is set to the correct location for the sspicnea application

  NOTE: In Windows 2003, the path does not show up in the dcomcnfg UI. Instead, check the Windows Registry manually for this information. For information about the Registry settings to check, see Table 17 on page 68.

  CAUTION: Using Registry Editor incorrectly can cause serious problems that may require you to reinstall your operating system. There is no guarantee that problems resulting from the incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk. It is strongly recommended that you back up your Registry before editing it. For more information about using the Registry Editor, see the Microsoft Windows documentation.

If the path or application type is incorrect, you must close the dcomcnfg application, reregister all Siebel Exchange Connector components, and restart dcomcnfg.

To reregister Siebel Exchange Connector components, perform the following substeps:

a. Open a Command Prompt window and navigate to *install_directory*\siebsrvr\bin, where *install_directory* is the installation directory for the Siebel Server software.

b. Enter the following commands:

```
sspicnea.exe /RegServer
regsvr32 sspicneaps.dll
sspicnfm.exe /RegServer
regsvr32 sspicnfmps.dll
regsvr32 sspicnexps.dll
```

   These commands register, respectively, the connector application, the proxy/stub component for the connector application, the file moniker, the proxy/stub component for the file moniker, and the proxy-stub component of the connector plug-in.

4. In the sspicnea Properties dialog box, click the Location tab, select Run application on this computer, and clear all other check boxes.

5. Click the Security tab, select one of the following settings (the wording depends on your software version), and then click Edit:

   - Use custom access permissions.
   - Customize in the Access Permissions area.

6. Inspect the Registry Value Permissions dialog box to see if the users that PIMSI Engine and Exchange Connector will run under have access to the sspicnea application.

   If necessary, add these users and specify Allow Access. Then click OK to return to the Properties dialog box.

7. On the Security tab, select one of the following settings (the wording depends on your software version), and then click Edit:

   - Use custom launch permissions.
   - Select Customize in the Launch Permissions area.

8 Inspect the Registry Value Permissions dialog box to see if the user that Exchange Connector will run under has permission to launch the sspicnea application.

If necessary, add this user and specify Allow Launch. Then click OK to return to the Properties dialog box.

9 Click the Identity tab, click This User, specify the user name and password for the user that the Exchange Connector application will run under, and then click Apply and OK.

NOTE: Specifying this user allows the Connector application authenticate in the Windows domain. You must specify the domain as part of the user name, using the format *domain_name\user_name.* The credential that is used must be a user who has the correct privileges for reading Exchange mailboxes.

10 Repeat Step 2 through Step 9, substituting sspicnfm for sspicnea in all steps, and making the following additional changes:

a In Step 6, only the PIMSI Engine user needs access to the sspicnfm application.

b In Step 8, only the PIMSI Engine user need permission to launch the sspicnfm application, instead of the Exchange Connector user.

Table 17. Exchange Connector Information to Verify in the Windows Registry

Exchange Connector File	Windows Registry Path to Verify
sspicnea.exe	HKEY_CLASSES_ROOT\CLSID\{9DFC7C9A-727C-11D7-BF98-CDAEB956EB35}\LocalServer32
sspicneaps.dll	HKEY_CLASSES_ROOT\CLSID\{9DFC7C99-727C-11D7-BF98-CDAEB956EB35}\InProcServer32
sspicnexps.dll	HKEY_CLASSES_ROOT\CLSID\{2056A863-A523-4247-9347-F884E53D9974}\InProcServer32
sspicnfm.exe	HKEY_CLASSES_ROOT\CLSID\{D9E08991-7245-11D7-BF98-CDAEB956EB35}\LocalServer32
sspicnfmps.dll	HKEY_CLASSES_ROOT\CLSID\{D9E08990-7245-11D7-BF98-CDAEB956EB35}\InProcServer32

You must complete an additional task to configure access to the PIMSI Engine component for the Exchange Connector application. The following procedures provide instructions for this configuration task for Windows 2000 and Windows 2003 environments.

To configure access to the PIMSI Engine for the Exchange Connector (Windows 2000)

1 On each machine that runs the PIMSI Engine component, from the Windows Start menu, choose Run, enter dcomcnfg.exe, and then click OK.

If one or more DCOM Configuration Warnings are displayed, click No.

2 Click the Default Security tab.

3 In the Default Access Permissions area of the dialog box, click Edit Default.

4 Add the user that the Connector application will run under.

5 Click OK twice.

To configure access to the PIMSI Engine for the Exchange Connector (Windows 2003)

1 On each machine that runs the PIMSI Engine component, from the Windows Start menu, choose Run, enter dcomcnfg.exe, and then click OK.

2 Within the dcomcnfg application, navigate to Console Root > Component Services > Computers > My Computer.

   If one or more DCOM Configuration Warnings are displayed, click No.

3 Right-click My Computer and select Properties.

4 Click the Default COM Security tab.

5 In the Access Permissions area of the dialog box, click Edit Default.

6 Add the user that the Connector application will run under.

7 Click OK twice.

Designating Trusted Exchange Servers

If the Exchange Connector application runs in a Windows 2003 environment, you must designate all of your Exchange Servers as trusted sites for your local intranet, as described in the following procedure.

This task is a step in “Process of Configuring SSSE” on page 44.

NOTE: This task is required only for Exchange Connector machines running Windows 2003.

To designated trusted Exchange Servers for Exchange Connectors in Windows 2003

1 On each Windows 2003 machine that runs the Siebel Exchange Connector, open the Internet Options Control Panel.

2 Click the Security tab.

3 Select Local intranet as your Web content zone, and then click Sites.

4 For each of your Exchange Servers, enter the HTTP URL for the server and click Add.

   If the dialog box does not provide a field for entering URLs, click Advanced to display the correct dialog box for this step.

5 Click OK twice to save the changes and exit from the Control Panel.

   If you clicked Advanced in Step 4, click OK three times instead of twice.

Modifying Log File Settings

SSSE log files contain information about SSSE operations. Each log file contains information for the operations that are carried out by a particular Siebel Server. The amount of information that is logged depends on the log level.

The following procedures describe how to change log levels for SSSE, and how to consolidate SSSE log files.

NOTE: Siebel Exchange Connector logs are separate from other SSSE logs. For more information about Exchange Connector log levels, see "Setting Exchange Connector Log Levels" on page 86.

These tasks are steps in "Process of Configuring SSSE" on page 44.

To change log levels for SSSE

1. On each Siebel Server that runs an SSSE component, open a Command Prompt window, and navigate to `install_directory\siebsrvr\bin`, where *install_directory* is the installation directory for your Siebel implementation.
2. Log in to Server Manager at the server level for this machine, using a command such as the following:

   ```
   srvrmgr /u db_user_name /p db_password /e enterprise_server /g gateway_host /s
   server_name
   ```

   Use the name of the Siebel Server you are configuring for the value *server_name*.
3. At the srvrmgr prompt, enter an appropriate command for the SSSE component log file you are configuring, such as one of the following commands:

   ```
   Change evtloglvl PIMSIEngSvc=n for comp PIMSIEng
   ```

   ```
   Change evtloglvl PIMSIEngSvc=n for comp PIMSIDispatcher
   ```

   Substitute an integer from 1 to 5 for n, where 1 logs the least information and 5 logs the most information.

By default, many SSSE log files are created. If you want, you can use the following procedure to consolidate these files into one log file for each SSSE component instance on a given Siebel Server. This means that if you consolidate all your SSSE log files, you get one log file for the PIMSI Dispatcher, on the machine where the Dispatcher runs, and you get one log file for each instance of the PIMSI Engine, on the machine where that instance runs.

To consolidate SSSE log files

1. On a Siebel Server that runs an SSSE component, open a Command Prompt window and navigate to `install_directory\siebsrvr\bin`, where *install_directory* is the installation directory for your Siebel implementation.
2. Enter the following command to log in to Server Manager at the server level for this machine:

```
srvrmgr /u db_user_name /p db_password /e enterprise_server /g gateway_host /s
server_name
```

Use the name of the Siebel Server you are configuring for the value *server_name*.

3 At the srvrmgr prompt, enter one the following commands:

- To consolidate PIMSI Engine component log files, enter the following command:

  ```
  Change param LogUseSharedFile=true for comp PIMSIEng
  ```

- To consolidate PIMSI Dispatcher component log files, enter the following command:

  ```
  Change param LogUseSharedFile=true for comp PIMSIDispatcher
  ```

The resulting consolidated log file is located in the standard log directory. It has a file name with the following format: <*component_name*>_<*taskId*>.log.

Configuring the Generic Siebel Organizer

SSSE Calendar synchronization operations require you to configure a Generic Siebel Organizer Login. SSSE automatically assigns the value of the Generic Siebel Organizer Login setting as the owner of any Siebel Activity record for which either of the following statements is true:

- The Microsoft Outlook meeting that corresponds to the Siebel Activity is owned by a user who is not a valid Employee in the Siebel implementation.
- The Microsoft Outlook meeting that corresponds to the Siebel Activity is owned by a user who does not have SSSE synchronization enabled.

The following procedure describes how to specify a value for the Generic Siebel Organizer Login. This task is a step in "Process of Configuring SSSE" on page 44.

To configure the Generic Siebel Organizer Login setting

1 Decide which login you want to use for the Generic Siebel Organizer setting.

   The login must meet the following conditions:

   - The login must correspond to a valid Siebel Employee record that includes an email address.
   - The login must be mapped to a valid Exchange Account that has an Active Directory entry.
   - For a production environment, use the login name of an SSSE administrator who does not have synchronization enabled. (Test environments do not need to meet this condition.)

2 From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Configuration > PIM Server Integration Configuration.

3 In the PIM Server Integration Configuration list, use standard query techniques to locate and select the record in which the value of the Profile Name field is Siebel.

4 In the Configuration Parameters list, locate and select the record in which the value of the Parameter field is Generic Siebel Organizer.

5 In this record, set the Value field to SADMIN, or to the login name of any other Siebel user who you want to designate as the generic organizer.

Configuring the Default Account

Every Business Contact record that is stored in the Siebel database should be associated with an Account. This association provides the Account's Primary Address for the Business Contact. When a Siebel Business Contact is synchronized using SSSE, the Account and Account Location fields for the contact and the Account's Primary Address are synchronized with the Company Name field, the Office field, and the Address field in Microsoft Exchange, respectively.

If a user enters a value for the Address field for a Contact record in Microsoft Outlook, but does not enter a value for the Company field and the Office field, a problem occurs when SSSE attempts to synchronize the record, because the Siebel data model cannot associate the address with the Contact if there are no values for Account Name and Location. For this reason, it is recommended that users always include a Company name and Office value when entering a Contact address in Microsoft Outlook.

To work around this problem, you can specify Account name and Account Location values that already exist in the Siebel database as the default values for the Account Name and Account Location fields. This allows the Contact address from Outlook to be synchronized in the Siebel database. However, that address is associated with the default account, since no account was supplied in Outlook.

NOTE: The Account Location field appears in the Contacts List and the Accounts List as the Site field.

This task is a step in "Process of Configuring SSSE" on page 44.

To set defaults for the Account and the Account Location fields

1 Log in to your Siebel application as an administrator and navigate to Site Map > PIM Server Integration > Siebel Domains.

2 In the Siebel Domains list, select Siebel Business Contact.

3 In the Siebel Domain Fields list, select the record where the value of the Name field is Account.

4 In the Default Value field of the selected record, specify an existing Siebel Account.

   If a user enters an Address for a Contact in Outlook without specifying an Account, SSSE assigns the default Account name to the Contact record when synchronizing it with the Siebel database, and associates the Address for the Contact with this default Account.

5 In the Siebel Domain Fields list, select the record where the value of the Name field is Account Location.

6 In the Default Value field of the selected record, specify an existing Account Location that corresponds with the default Account you specified in Step 4.

Tuning SSSE Siebel Profile Parameters

SSSE contains various parameters that you can adjust to optimize performance. The following procedure describes how to change Siebel profile parameters. The profile applies to all PIMSI Engines in your Siebel Enterprise.

This task is a step in "Process of Configuring SSSE" on page 44.

To tune SSSE parameters in the Siebel profile

1. Log in to your Siebel application as an administrator and navigate to Site Map > Administration - PIM Server Integration > Configuration > PIM Server Integration Configuration.
2. In the PIM Server Integration Configuration list, select the record in which the value of Profile Name is Siebel.
3. In the Configuration Parameters list, modify the fields or add records as needed to tune the performance of your Siebel implementation, using the information in Table 18 on page 73.

Table 18. Siebel Profile Configuration Parameters

Section	Parameter	Default	Comment
Siebel	AttendeeQueryForceEmailLower	FALSE	When synchronizing an appointment from Exchange to Siebel, force the email addresses of attendees to lower case when querying for the contact in Siebel. Set this parameter to TRUE if your Siebel email addresses use mixed case or upper case letters.
Siebel	DispCycleCount for GC	12	Determines how many times the Dispatcher runs before unneeded information is removed from the S_SD_SYNC_INFO table, where information is stored about data to synchronize. Using default values, this removal of unneeded information occurs once an hour, because the Dispatcher job is normally run every five minutes.

Table 18. Siebel Profile Configuration Parameters

Section	Parameter	Default	Comment
Siebel	ExtractStartDate	01/01/1980	Determines which Calendar and To Do records will be excluded from synchronization because of their date settings. For more information, see "Factors That Determine Calendar Synchronization" on page 131 or "Factors That Determine To Do Record Synchronization" on page 138.
Siebel	ExtractStartDateFormat	MM/DD/YYYY	Date format for the ExtractStartDate parameter. SSSE uses the format that you specify in this setting to interpret the value of your ExtractStartDate setting correctly. It is not necessary for this format to match the date format that your Siebel application generally uses.
Siebel	ForceTranscode	FALSE	Forces text conversion to use transcode. Set this parameter to TRUE if your Siebel implementation uses a transcode database type.
Siebel	MaxAlarmLeadMinutes	Not applicable	Maximum number of minutes for an appointment alarm lead time.
Siebel	MaxUserExtractReqBatchSize	20	Maximum number of user extractions that can be requested in one synchronization request.

Table 18. Siebel Profile Configuration Parameters

Section	Parameter	Default	Comment
Siebel	NotificationFrequency	2	If the PIMSI Dispatcher detects that a PIMSI Engine component is not responding correctly, the Dispatcher signals the Engine to discover whether it can respond. This parameter specifies how many times the Dispatcher should request a response from an unresponsive PIMSI Engine before attempting to recover it. **NOTE:** The PIMSI Dispatcher automatically attempts to recover any PIMSI Engine that has failed to respond to the set number of requests. See the Dispatcher log for records of any unresponsive Engines. See the individual Engine log for information that may help you diagnose why the Engine stopped responding.
Siebel	OnlySyncCategorizedContacts	FALSE	Determines whether or not Initial Extract operations synchronize Exchange Contact records that have the Category field set to a specified value. Case-insensitive. For more information about this parameter, see "Initial Extract and Ongoing Extract" on page 19.

Table 18. Siebel Profile Configuration Parameters

Section	Parameter	Default	Comment
Siebel	ReconciliationDuration	60	Specifies how many seconds the PIMSI Dispatcher waits after signaling a PIMSI Engine. If the Dispatcher does not receive a response within this time period, the Dispatcher either attempts to recover the Engine or signals it again, depending on whether or not the number of unsuccessful signals has reached the value of the Notification Frequency setting.
Siebel	ResolveContactbyEmailAddress	FALSE	If set to TRUE, use email addresses, as well as first and last names, when trying to resolve contacts.

About Mapping Exchange Connectors to Exchange Servers

This topic provides background information about how Exchange Connector applications work with Exchange Servers. It is important to understand this information before proceeding to the next task, "Configuring Exchange Connector Parameters" on page 79.

There are two basic ways you can configure Exchange Connector applications to work with Exchange Servers: with and without Connector Application Map records. The following paragraphs describe each type in more detail.

Configurations That Include Connector Application Map Records

In this configuration type, you create Connector Application Map records that assign specific Exchange Connector machines to handle synchronizations with specific Exchange Servers. This configuration type is most useful if you want to optimize performance in a Siebel implementation that has Exchange Servers in widely scattered geographical locations—performance may be optimized when each Exchange Connector machine is located close to the Exchange Server that the Connector synchronizes.

This configuration type has the following characteristics:

- Each Connector Application Map record assigns an Exchange Connector machine to synchronize users on a single Exchange Server. In Connector Application Map records, each Exchange Connector machine is represented by its Engine Share. Engine Shares are UNC path configurations that indicate which machines are to run Exchange Connector applications (sspicnea.exe files).

- An Exchange Server can be listed in multiple Connector Application Map records, but Exchange Connector machines can only be designated by one record each. This means each Exchange Server can be synchronized by multiple Exchange Connector machines, but no Exchange Connector machine can be assigned to synchronize more than one Exchange Server.
- The maximum number of Connector Application Map records you can create is the same as the number of Engine Shares you have.
- If the Connector Application Map does not assign any Exchange Connector machines to a particular Exchange Server, then you must configure the machine that runs the PIMSI Engine service to run Exchange Connector applications. The PIMSI Engine machine is the one machine that can synchronize users whose mailboxes are located on Exchange Servers that are not listed in Connector Application Map records. If the PIMSI Engine machine is not configured to run the Exchange Connector, then synchronization will fail with an error message for users whose mailboxes are located on the unmapped Exchange Servers.
- When the Exchange Connector needs to run a new instance of the application, it counts the number of Exchange Connector applications that are running on each Exchange Connector machine that is assigned to the relevant Exchange Server. The Connector runs the new instance of the application on the machine that has the fewest Exchange Connector applications running when it is checked.

Configurations That Exclude Connector Application Map Records

In this configuration type, you do not create any Connector Application Map records. SSSE dynamically assigns an Exchange Connector application to synchronize each user, as needed—any Exchange Connector machine can perform synchronizations with any Exchange Server. This configuration type is most useful for load balancing in implementations where wide-area network performance is not a major factor, or where the number of Exchange Servers exceeds the number of Exchange Connector machines.

This configuration type has the following characteristics:

- There are no Connector Application Map records in the Siebel implementation.
- Each Exchange Connector machine can synchronize users on any Exchange Server.
- When the Exchange Connector needs to run a new instance of the application, it counts the number of Exchange Connector applications that are running on each Exchange Connector machine. The Connector runs the new instance of the application on the machine that has the fewest Exchange Connector applications running when it is checked.

For information about creating the Engine Shares that designate which machines run the Exchange Connector application, see "Setting Up the Connector Share Directory" on page 56.

About Using Exchange Virtual Directories

If your Siebel implementation uses any Exchange virtual directories that have names other than the single word Exchange, then you must include information about these directory names in the parameters for the Siebel Exchange Connector. This topic describes how the necessary parameter names and values must relate to each other. For more information on setting the parameters, see "Configuring Exchange Connector Parameters" on page 79.

Table 19 shows the Section, Parameter, and Value relationships that you must create to use virtual directories with non-default names. In this table, *n* can be any character that is unique for its profile section. For each Exchange Server that you want to associate with a virtual directory, you need to set one Exchange Virtual Directory Map parameter, one Exchange Server parameter, and at least one Virtual Directory parameter.

Table 19. Exchange 2000/2003 Connector Parameters Related to Virtual Directories

Section	Parameter	Comment
Calendar	Exchange Virtual Directory Map *n*	In the Value field, enter Virtual Directory Map *n* exactly as you will later name a profile section. In the Parameter field, be sure separate each word from the next with a single space.
Virtual Directory Map *n*	Exchange Server	In the Value field, enter the name of an Exchange Server. Use all upper case characters. Do not include domain information in the server name (i.e., enter EXCHG01, rather thanEXCHG01.YOURCOMPANY.COM). In the Parameter field, be sure separate each word from the next with a single space.
Virtual Directory Map *n*	Virtual Directory 1	In the Value field, enter the name of a virtual directory that is associated with the Exchange Server for the current Virtual Directory Map. If your implementation includes a virtual directory called Exchange, you must specify it as a value for one of your virtual directories. In the Parameter field, be sure separate each word from the next with a single space.
Virtual Directory Map *n*	Virtual Directory 2	(Optional) In the Value field, enter the name of another virtual directory associated with the Exchange Server for the current Virtual Directory Map. In the Parameter field, be sure separate each word from the next with a single space.

See Table 20 for an example of the kind of values you must specify for these related settings.

Table 20. Example of Exchange Connector Setting Values Related to Virtual Directories

Section	Parameter	Value
Calendar	Exchange Virtual Directory Map 1	VirtDirSection1
VirtDirSection1	Exchange Server	EXCHSRV1
VirtDirSection1	Virtual Directory 1	VirtDir1
VirtDirSection1	Virtual Directory 2	VirtDir2

Configuring Exchange Connector Parameters

The Siebel Exchange Connector contains various parameters that you can adjust to optimize performance. The following procedure describes how to tune Exchange Connector parameters.

This task is a step in “Process of Configuring SSSE” on page 44.

Exchange Connectors can run on any machine that is equipped with the sspicnea.exe executable file and certain SSSE DLLs. Exchange Connector, PIMSI Engine, and PIMSI Dispatcher can all be located on different machines.

If an SSSE deployment contains any Exchange Connector applications that reside on machines that do not contain PIMSI Engines, those Exchange connector applications are known as remote Exchange connector applications. For information about installing Exchange Connectors, see “Installing Siebel Exchange Connector” on page 42.

Use the following procedure to configure Exchange Connector parameters on any machine where Exchange Connector software is installed.

To configure Siebel Exchange Connector parameters

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Configuration > PIM Server Integration Configuration.
2. In the PIM Server Integration Configuration list, select the record in which the value of Profile Name is Exchange 2000 Connector.

   NOTE: This is the correct record to select for either 2000 or 2003 Exchange environments.

3. In the Configuration Parameters list, create or modify and save records as needed, using the information in Table 21 on page 80.

   You may be able to use default values for most of the parameters listed. However, you must create records for the Engine Shares section.

Table 21. Exchange 2000 Connector Configuration Parameters

Section	Parameter	Default	Comments
Calendar	QueryExternalDomains	FALSE	When the Exchange Connector cannot locate a Calendar item attendee in the Active Directory Global Catalog, this setting determines whether or not to perform an exhaustive Active Directory search.

Table 21. Exchange 2000 Connector Configuration Parameters

Section	Parameter	Default	Comments
Connector Application Map	Name of an Engine Share (for example, Share1 or Share01)	Not applicable	(Optional) If your Exchange Servers are located in several geographical locations, you may be able to improve performance by assigning synchronization tasks for each Exchange Server to Exchange Connector applications that run nearby. To do this, create one or more records with Section set to Connector Application Map. In the Parameter field of each record, enter the name of one of your Engine Shares (the shared directories where Exchange Connector applications are run). In the Value field, enter the name of the Exchange Server that you want that Exchange Connector to serve. You can create as many Connector Application Map records as you have Engine Shares. For more information about this setting, see “About Mapping Exchange Connectors to Exchange Servers” on page 76. **NOTE:** If you have sync-enabled users on more Exchange Servers than you have Engine shares, make sure there is an Engine Share on the PIMSI Engine machine that is not associated with any particular Exchange Server. This share must serve users on any Exchange Server that is not explicitly specified in a Connector Application Map record.

Table 21. Exchange 2000 Connector Configuration Parameters

Section	Parameter	Default	Comments
Engine Shares	Share*n*	Not Applicable	The *n* in the parameter name should be a unique number. Specify the value of each share as a UNC path to a remote or local file system directory that has been shared, using the format `\\machine_name\share_name`. Connector applications are run on the machine indicated in the share. For more information about configuring shares, see "Setting Up the Connector Share Directory" on page 56.
PreferredGCServers	GCServer*n* (replace n with 1, 2, and so on)	Not applicable (Enter the name of a Global Catalog server)	(Optional) Indicates one or more preferred Active Directory Global Catalog servers for the Exchange Connector to contact when identifying SSSE user mailboxes.
SyncOptions	PreserveAttachments	TRUE	Indicates whether or not the Connector should preserve PIM attachments for noncalendar domains. If this parameter is set to FALSE, attachments are removed when the Connector updates the record in Exchange. This setting does not affect Siebel attachments.
SyncOptions	PreserveUnmappedFields	TRUE	Indicates whether or not the Connector should preserve the data for fields which are not mapped for synchronization for noncalendar domains. If this parameter is set to FALSE, any data in an unmapped field is removed from the record in Exchange.

Table 21. Exchange 2000 Connector Configuration Parameters

Section	Parameter	Default	Comments
Timeouts	Connect	180 seconds	When an Exchange Connector application first runs, it waits the configured number of seconds for a PIMSI Engine instance to establish a connection with it. If no connection is established, the Exchange Connector application shuts down to conserve resources. You may want to increase the value of this setting if your users run SSSE over a slow network. **NOTE:** The application is automatically restarted if the PIMSI Dispatcher requests synchronization for more users than currently running Exchange Connector instances can handle.
Timeouts	Reconnect	30 seconds	When a running Exchange Connector application detects that no PIMSI Engine instance is exchanging data with it, the application waits the configured number of seconds for a PIMSI Engine instance to reestablish a connection. If no connection is established, the Exchange Connector application shuts down to conserve resources. You may want to increase the value of this setting if your users run SSSE over a slow network.

Table 21. Exchange 2000 Connector Configuration Parameters

Section	Parameter	Default	Comments
UsersPerApplication	MaxUsers	10	Maximum number of users each instance of a Connector application can simultaneously synchronize. Maximum value is 200. You may find that performance improves if you use a low value for this setting during initial extract operations. For more information about this setting, see "About Tuning SSSE for Optimal Performance" on page 55.

Enabling and Disabling Components on SSSE Servers

As with all Siebel Servers, you can selectively enable and disable server components and component groups on the PIMSI Engine and PIMSI Dispatcher machines. This task is a step in "Process of Configuring SSSE" on page 44.

For proper operation of SSSE, use the following guidelines for enabling and disabling server components and component groups:

- Enable the PIMSI component group on the Enterprise.
- Enable the PIMSI Engine (pimsieng) component on the Enterprise and on one or more individual Siebel Server machines.
- Enable the PIMSI Dispatcher (pimsidispatcher) component on the Enterprise and on just one Siebel Server machine.
- For optimum performance, disable the PIMSI Engine component on the PIMSI Dispatcher server.

For more information on enabling and disabling server components and component groups, see *Siebel System Administration Guide*.

Restarting Siebel Services

You must restart the Siebel Servers and Siebel Gateway Name Server for the changes that you made in this chapter to take effect. For information about restarting Siebel Servers, see *Siebel System Administration Guide*.

This task is a step in the process of "Configuring Siebel Server Sync" on page 43.

Configuring and Starting PIMSI Dispatcher

PIMSI Dispatcher runs as a job on a Siebel Server machine. This topic discusses PIMSI Dispatcher job parameters.

PIMSI Dispatcher runs for a certain amount of time for each dispatching cycle. The amount of execution time is dependent upon your current configuration (the number of active users, machine configuration, and so on).

Under certain conditions, PIMSI Dispatcher may enter a recovery mode to identify PIMSI Engines that have stopped working and to recover any resources those Engines had been using, so that synchronization can resume. When PIMSI Dispatcher enters the recovery mode, multiply NotificationFrequency by ReconciliationDuration to determine the increase in the amount of time the PIMSI Dispatcher requires to complete its run. For more information about the NotificationFrequency and ReconciliationDuration parameters, see "Configuring the Default Account" on page 72.

The following procedure describes how to create the PIMSI Dispatcher job, tune the job's parameters, and start the job. This task is a step in "Process of Configuring SSSE" on page 44.

To create the PIMSI Dispatcher job and tune its parameters

1. Log in to your Siebel application as an administrator and navigate to Site Map > Administration - Server Management > Jobs.
2. In the Jobs List or the Jobs Detail form, click New.
3. Complete the fields as described in the following table.

   For more information about starting jobs, see *Siebel System Administration Guide*.

Field	Comment
Component/Job	Specify PIMSI Dispatcher.
Mode	Specify Asynchronous.
Requested Server	Specify the machine where you installed the Siebel Server software for PIMSI Dispatcher.
Repeating?	Select the check box.
Repeat Unit	The suggested value is Minutes.
Repeat Interval	It is strongly recommended that you use the suggested value of 5. **NOTE:** Setting a Repeat Interval smaller than five minutes can cause SSSE to miss some Siebel updates, causing incomplete synchronization and possibly decreasing performance throughout the Siebel Enterprise.

Field	Comment
Repeat From	The suggested value is End.
Repetitions	The suggested value is 0.

4 Save the record and click Start to begin the initial extract.

Ongoing extracts follow automatically, separated by the repetition interval.

Setting Exchange Connector Log Levels

Log files for the Siebel Exchange Connector are located in the `siebsrvr\log` directory on each machine where the sspicnea.exe application runs. The Exchange Connector log files have names with the format PIMSIExchConnApp_*processID*.log. These log files contain Exchange Connector messages regarding the synchronization of users with Exchange.

By default, the Siebel Exchange Connector applications log messages at log level 2. The following procedure describes how to increase or decrease the log level for the application. This task is an optional step in "Process of Configuring SSSE" on page 44.

To increase or decrease the log level of a Siebel Exchange Connector application

1. On each machine where the Siebel Exchange Connector application (sspicnea.exe) runs, right-click My Computer and choose Properties.
2. Click the Advanced tab.
3. Click Environment Variables.
4. In the System Variables area of the dialog box, click New.
5. In the Variable Name field of the New System Variable dialog box, enter SIEBEL_LOG_EVENTS.
6. In the Variable Value field, enter PIMSIEngSvc=*n*, where *n* is a value from 1 through 5, inclusive, and then click OK twice.
7. Restart all of your PIMSI Engine components.

   Any change in the log level requires that the application be restarted. The Siebel Exchange Connector application automatically restarts when you restart PIMSI Engines.

6 Customizing Siebel Server Sync

This chapter covers ways in which you can customize SSSE. It includes the following topics:

About Customizing SSSE

SSSE supports the following kinds of customization, within each supported domain and for a specified set of database tables:

- Modifying certain properties of fields that are already available for synchronization, such as field names
- Modifying existing field mappings in the following ways:
  - Mapping an Exchange field that is already synchronized to a Siebel field that you add for synchronization
  - Mapping a Siebel field or multi-value group (MVG) that is already synchronized to an Exchange field that you add for synchronization
- Adding new field mappings in the following ways:
  - Adding a new field or MVG for synchronization in a supported Siebel business component and mapping it to a previously unmapped Exchange field (includes adding a new column in the underlying Siebel base table)
  - Adding a new field for synchronization in Exchange and mapping it to a previously unmapped Siebel field or MVG
- Deleting existing field mappings

The customization process can involve changing some or all of the following entities:

- Integration Objects
- Integration Data Maps
- Domain configurations
- Field configurations

Any administrator who customizes SSSE should have experience with working in Siebel Tools, and should have a good working knowledge of Microsoft Exchange, including the internal representations of field names in Exchange.

About Synchronizing Additional Fields

SSSE allows fields from certain database tables to be added for synchronization, but does not support fields from certain other tables. Other characteristics can also affect whether SSSE can synchronize a field successfully. For example, SSSE does not support synchronization of calculated fields. This topic discusses supported and unsupported tables, and other characteristics of fields that affect synchronization possibilities.

A major factor in whether or not you can add a field for synchronization is whether or not SSSE will detect changes to that field. SSSE monitors a specific set of supported database tables to identify changes to be synchronized to Exchange. If a field resides in a table that SSSE does not monitor, SSSE does not detect changes in field values, so synchronization of changes in those tables is not supported.

Table 22 lists the tables in each Siebel Domain that can have fields added for synchronization. You can add most fields from these tables for synchronization.

NOTE: If a field based on a particular table is a multivalue group (MVG), then SSSE synchronizes only the Primary value from the MVG.

CAUTION: When choosing fields from supported tables to add for synchronization, take care not to choose business component system fields or fields that have special meaning for Siebel components (and that should be updated only by those Siebel components), since synchronizing such fields can have unpredictable results.

Table 22. Siebel Domains and Tables That Allow Fields To Be Added for Synchronization

Siebel Domain	Supported Tables	Is Field Based on Table an MVG?
Business Contact	S_ADDR_ORG	Y
	S_ADDR_PER	Y
	S_CONTACT	N
	S_CONTACT_INFO	Intersection table
	S_OPTY	N
	S_ORG_EXT	N
	S_PARTY	N
	S_PROJ	N
	S_USER	N
Calendar and Tasks	S_EVT_ACT	N
	S_OPTY	N
	S_ORG_EXT	N
	S_PROJ	N
	S_SRV_REQ	N
Employees	S_ADDR_ORG	Y
	S_CONTACT	N
	S_CONTACT_INFO	Intersection table
	S_PARTY	N
	S_POSTN	N
Personal Contacts	S_ADDR_PER	Y
	S_CONTACT	N
	S_CONTACT_INFO	Intersection table
	S_PARTY	N

If you want to synchronize Siebel fields that are based on tables other than those listed in Table 22 on page 89, contact Siebel Expert Services for assistance in determining feasibility.

About SSSE Integration Objects

Each domain that SSSE synchronizes has a Siebel Integration Object and an Intermediate Integration Object. Siebel Integration Objects are used to obtain information from the Siebel database. Intermediate Integration Objects are used to send that data to the PIMSI Engine component.

You must modify Integration Objects any time you customize SSSE, whether the customization involves adding new fields or modifying existing fields. Table 23 shows the Integration Objects for each domain that SSSE handles.

Table 23. Integration Object Names for Siebel Domains

Domain	Siebel Integration Object	Intermediate Integration Object
Business Contact	PIMSI Business Contact	PIMSI Intermediate Business Contact
Calendar	PIMSI Calendar	PIMSI Intermediate Calendar
Employee	PIMSI Employee	PIMSI Intermediate Employee
Personal Contact	PIMSI Contact Personal	PIMSI Intermediate PersonalContact
Task	PIMSI Task	PIMSI Intermediate Task

About SSSE Data Maps

Each domain that SSSE synchronizes has an Inbound Data Map for converting Exchange data to Siebel data, and an Outbound Data Map for converting Siebel data to Exchange data. Data maps must be modified any time you customize SSSE, whether the customization involves adding new fields or modifying existing fields. Table 24 shows the names of the data maps for each domain that SSSE handles.

Table 24. Data Map Names for Siebel Domains

Domain	Inbound Data Map	Outbound Data Map
Business Contact	PIMSI Business Contact Inbound Map	PIMSI Business Contact Outbound Map
Calendar	PIMSI Calendar Inbound Map	PIMSI Calendar Outbound Map
Employee	PIMSI Employee Inbound Map	PIMSI Employee Outbound Map
Personal Contact	PIMSI Personal Contact Inbound Map	PIMSI Personal Contact Outbound Map
Task	PIMSI Task Inbound Map	PIMSI Task Outbound Map

Process of Customizing SSSE

To add a field to the fields that SSSE synchronizes, or to modify an existing field that is synchronized, perform the following tasks before starting or restarting the PIMSI Engine and PIMSI Dispatcher components:

- "Changing Integration Objects" on page 91
- "Changing SSSE Data Maps" on page 96
- "Changing Siebel Domain Configurations" on page 98
- "Changing PIM Domain Configuration" on page 100
- "Changing Domain Map Configurations" on page 104
- "Changing User Filtering Configurations" on page 107

NOTE: All tasks in this process assume that the field already exists in the appropriate Siebel Business Component.

Changing Integration Objects

Any time you add or change a field for SSSE to synchronize, you must change one or more Integration objects for the Siebel domain that is involved. Table 25 shows the changes that are required.

This task is a step in "Process of Customizing SSSE" on page 91.

Table 25. Integration Object Change Requirements

Field Change	Integration Object Modifications Required
Add a new field for synchronization	Siebel Integration Object and Intermediate Integration Object
Modify an existing field that is synchronized	Intermediate Integration Object

The following procedure briefly describes how to change an Integration Object as part of customizing SSSE. For more information about Integration Objects, see "About SSSE Integration Objects" on page 90.

For an example of how to perform this task for a new field that you want to synchronize, see "Example of Changing Integration Objects (New Field)" on page 92.

For an example of how to perform this task for an existing field that you want to modify, see "Example of Changing Integration Objects (Existing Field)" on page 94.

NOTE: This procedure assumes that the new field already exists in the appropriate Siebel Business Component, but does not yet exist in the Siebel Integration Object or the Intermediate Integration Object. The procedure also assumes that the new field has not yet been synchronized.

To change an integration object

1. Log in to Siebel Tools.
2. Select the Integration Object that you want to change.
3. Select the integration component for which a field needs to be changed or added.
4. Change the integration component field properties as needed.
5. Save the record.
6. Recompile the SRF for the project.

Example of Changing Integration Objects (New Field)

This topic gives one example of changing integration objects as part of customizing SSSE. You may use this feature differently, depending on your business requirements.

In this example, you want to add the new Siebel field ManagerLogin to the Employee domain, so SSSE can synchronize it. To accomplish this, you must change both the Siebel Integration Object and the Intermediate Integration Object for the Employee domain. For more information about Integration Objects, see "About SSSE Integration Objects" on page 90.

NOTE: This example assumes that the new ManagerLogin field already exists in the appropriate Siebel Business Component, but it does not yet exist in the Siebel Integration Object or the Intermediate Integration Object, and it has not yet been synchronized.

To change Siebel and Intermediate Integration Objects for a new field

1. Log in to Siebel Tools.
2. In the Object Explorer pane, select Integration Object, and complete the following substeps:
   a. In the Integration Objects list editor, select PIMSI Employee.
   b. In the Object Explorer pane, select Integration Component.
   c. In the Integration Component list editor, select Employee.
   d. Scroll to the right until the Inactive field is visible, and clear the Inactive check box.
3. In the Object Explorer pane, select Integration Object, and complete the following substeps:
   a. In the Integration Object list editor, select PIMSI Intermediate Employee.
   b. In the Object Explorer pane, select Integration Component.
   c. In the Integration Component list editor, select Employee.
   d. In the Object Explorer pane, select Integration Component Field.
   e. In the Integration Component Field list, right-click any record, and choose Copy Record.
   f. In the Siebel Tools menus, select View Windows > Properties Window.

g In Properties pane, modify property values for the copied record as shown in the following table.

Field Property	Field Property Value	Comment
Name	ManagerLogin	Internal name of the field. The Name value must differ from the Parent Name value, or data will not synchronize properly.
External Name	ManagerLogin	For a Siebel Integration Objects, External Name must match the name of the field as it is specified in the Siebel Business Component. For an Intermediate Integration Object, you can choose any value for External Name.
XML Tag	ManagerLogin	Enter a value that does not contain any spaces. This value is included in the XML output that SSSE produces.
XML Sequence	18	Specifies the order in which the field will appear in the Output XML message. Enter a value that is not already present in the field list, such as the number that follows the value used for the last existing field in the sequence. It is recommended that you use the same value for XML Sequence and External Sequence.

Field Property	Field Property Value	Comment
External Sequence	18	Specifies the order in which the field will appear, when Data Mapper is used to map the fields. Enter a value that is not already present in the field list, such as the number that follows the value used for the last existing field in the sequence. It is recommended that you use the same value for XML Sequence and External Sequence.
Parent Name	Employee	The Integration component that is the parent of the Integration Object that is being modified.

CAUTION: For Siebel Integration Objects (but not Intermediate Integration Objects), if an MVG field is not a user key, be sure to set the XML Sequence property value and the External Sequence property value to be greater than the value of a user key MVG field. If you do not specify a greater value, synchronization may not work properly for information that travels from Exchange to the Siebel application.

A user key MVG field is a field that is specified in the Integration Component User Key object as a user key. For example, for the Integration Object called PIMSI Employee and the Integration Component called Employee_Position, the user key field is Position. If any new MVG field is added to the Employee_Position component, then the XML Sequence and External Sequence property value for the new field should be greater than that of the Position field.

4. Save the record.
5. Recompile the SRF for the project.

   Use the recompiled SRF when you make corresponding changes to Data Maps.

Example of Changing Integration Objects (Existing Field)

This topic gives one example of changing an integration object as part of customizing SSSE. You may use this feature differently, depending on your business requirements.

In this example, in the Employee domain, you want to change the name of the EmployeePosition field to Position. To accomplish this, you must change the Intermediate Integration Object for the Employee domain. For more information about Integration Objects, see "About SSSE Integration Objects" on page 90.

NOTE: This example assumes that the field, itself, has already been renamed in Siebel Tools, but it has not yet been renamed in the Intermediate Integration Object.

To change an Intermediate Integration Object to synchronize an existing field

1. Log in to Siebel Tools.
2. In the Object Explorer pane, select Integration Object, and complete the following substeps:
   a. In the Integration Object list editor, select PIMSI Intermediate Employee.
   b. In the Object Explorer pane, select Integration Component.
   c. In the Integration Component list editor, select EmployeePosition.
   d. In the Object Explorer pane, select Integration Component Field.
   e. In the Integration Component Field list, select EmployeePosition.
   f. In the Siebel Tools menus, select View Windows > Properties Window.
   g. In the Properties pane, modify EmployeePosition field property values as shown in the following table.

Field Property	Old Value	New Value
Name	EmployeePosition	Position
External Name	EmployeePosition	Position
XML Tag	EmployeePosition	Position
Parent Name	EmployeePosition	EmployeePosition

CAUTION: The value for Name must differ from the value for Parent Name, or data will not synchronize properly.

NOTE: The values for External Sequence and XML Sequence are not listed in the preceding table because these settings do not need to be changed when you are modifying an existing field. The Parent Name values in the table reflect the fact that the EmployeePosition Integration Component is the parent of the EmployeePosition field that you are modifying.

3. Save the record.
4. Recompile the SRF for the project.

   Use the recompiled SRF when you make corresponding changes to Data Maps.

Changing SSSE Data Maps

Data maps must be modified whenever you add a field for SSSE to synchronize and whenever you modify a synchronized field. The following procedure briefly describes how to change a Data Map as part of customizing SSSE. This task is a step in "Process of Customizing SSSE" on page 91. For more information about Data Maps, see "About SSSE Data Maps" on page 90. For an example of how to perform this task for a new field to be synchronized, see "Example of Changing Data Maps (New Field)" on page 96. For an example of how to perform this task for an existing field to be modified, see "Example of Changing Data Maps (Existing Field)" on page 97.

CAUTION: You must change the Inbound Data Maps for the applicable domains before you proceed to "Changing Siebel Domain Configurations" on page 98. If this is not done, then Siebel administration screens for SSSE may not reflect the customization tasks you have already completed.

To change a Data Map for SSSE

1. Use the SRF that contains your changes to Integration Objects.
2. From the Siebel application menus, select Navigate > Site Map > Administration - Integration > Data Map Editor.
3. In the Integration Map Object list, select the Data Map you need to change.

   For information about the names of Data Maps for SSSE domains, see "About SSSE Data Maps" on page 90.
4. In the Integration Component Map list, select the record for the component you need to change, and then scroll down.

   To determine which component to select, inspect the Source Component Name column in the Integration Component Map list for the component that you modified in Siebel Tools. The same component needs to be modified in the data map.
5. In the Integration Field Map list, create a new record, if necessary, and modify field values.

Example of Changing Data Maps (New Field)

This topic gives one example of changing data maps as part of customizing SSSE. You may use this feature differently, depending on your business requirements.

Continuing with the example from "Example of Changing Integration Objects (New Field)" on page 92, you want to add the new Siebel field ManagerLogin to the Employee domain, so SSSE can synchronize it. To accomplish this, you must change the PIMSI Employee Inbound Map and the PIMSI Employee Outbound Map. For more information about Integration Objects, see "About SSSE Integration Objects" on page 90.

To change the data map for a new field

1. Use the SRF that contains your changes to Integration Objects.

2 In your Siebel application, from the application-level menu, select Navigate > Site Map > Administration - Integration > Data Map Editor.

3 In the Integration Map Object list, select PIMSI Employee Inbound Map.

4 In the Integration Component Map list, select Employee_Employee, and then scroll down.

5 In the Integration Field Map list, click New and complete the fields as shown in the following table.

Field	Comments
Source Expression	[ManagerLogin]
Target Field Name	ManagerLogin

6 Save the record.

7 In the Integration Map Object list, select PIMSI Employee Outbound Map.

8 Repeat Step 4 through Step 6.

Example of Changing Data Maps (Existing Field)

This topic gives one example of changing data maps as part of customizing SSSE. You may use this feature differently, depending on your business requirements.

Continuing with the example from "Example of Changing Integration Objects (Existing Field)" on page 94, you want to change the name of the existing EmployeePosition field to Position. To accomplish this, you must change the PIMSI Employee Inbound Map and the PIMSI Employee Outbound Map. For more information about Integration Objects, see "About SSSE Integration Objects" on page 90.

To change the data map for an existing field

1 Use the SRF that contains your changes to Integration Objects.

2 In your Siebel application, from the application-level menu, select Navigate > Site Map > Administration - Integration > Data Map Editor.

3 In the Integration Map Object list, select PIMSI Employee Inbound Map.

4 In the Integration Component Map list, select EmployeePosition_EmployeePosition, and then scroll down.

5 In the Integration Field Map list, use standard query techniques to locate and select the record in which Source Expression has a value of [EmployeePosition], and change that value to [Position].

6 Save the record.

7 In the Integration Map Object list, select PIMSI Employee Outbound Map.

8 Repeat Step 4 through Step 6.

Changing Siebel Domain Configurations

The following procedure describes how to change a Siebel domain configuration, as part of customizing SSSE. This task is a step in "Process of Customizing SSSE" on page 91.

This procedure involves Field Type settings for both Siebel and PIM domains. The following constraints exist:

- Synchronization requires mapping between Siebel fields and PIM fields.
- Mapping is only possible between fields that are listed in the Siebel Domain Fields list and the PIM Domain Fields list.
- For each field that you want to synchronize, the Field Type value for the Siebel Domain Field must match the Field Type value for the corresponding PIM Domain Field.

For more information about SSSE PIM domain configuration, see "Changing PIM Domain Configuration" on page 100.

For an example of how to perform this task for a new field to be synchronized, see "Example of Changing Siebel Domain Configurations (New Field)" on page 99.

For an example of how to perform this task for an existing field to be modified, see "Example of Changing Siebel Domain Configurations (Existing Field)" on page 99.

To change a Siebel domain configuration

1. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Siebel Domains.
2. In the Siebel Domains list, select the domain to reconfigure.
3. In the Siebel Domain Fields list, click Sync Fields.

   This action synchronizes the inbound data maps with Siebel domains, so the domains acquire the new fields and field modifications that were made in the corresponding Inbound Data Maps. However, Sync Fields does not delete fields that you deleted in Data Maps. You must delete these fields manually, as described in Step 5 of this procedure.

4. In the Siebel Domain Fields list, select the record for the newly created or updated field, and set an appropriate value for Field Type.

   The value often describes the type of data that the Siebel field holds. For instance, both the Business Phone field and the Home Phone field may have Field Type set to Phone.

   NOTE: In order for SSSE to map a Siebel field to a PIM field successfully, you must set Field Type for the Siebel field to a value that matches the field type of the PIM field.

5. In the Siebel Domain Fields list, use standard query techniques to locate the records for any fields you deleted from Inbound Data Maps, and delete those records.

Example of Changing Siebel Domain Configurations (New Field)

This topic gives one example of changing SSSE configuration settings as part of customizing SSSE. You may use this feature differently, depending on your business requirements.

Continuing with the example from "Example of Changing Integration Objects (New Field)" on page 92, you want to add the new Siebel field ManagerLogin to the Employee domain, so SSSE can synchronize it. To accomplish this, you must change the Siebel domain configuration.

To change a Siebel domain configuration for a new field

1. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Siebel Domains.
2. In the Siebel Domains list, select the record for the Siebel Employee domain.
3. In the Siebel Domain Fields list, click Sync Fields.
4. In the Siebel Domain Fields list, select the record for the ManagerLogin field, verify that both Name and Field Identifier are set to ManagerLogin, and set Field Type to Manager Name.

Example of Changing Siebel Domain Configurations (Existing Field)

This topic gives one example of changing SSSE configuration settings as part of customizing SSSE. You may use this feature differently, depending on your business requirements.

Continuing with the example from "Example of Changing Integration Objects (Existing Field)" on page 94, you want to change the name of the existing EmployeePosition field to Position. To accomplish this, you must change the Siebel domain configuration.

To change a Siebel domain configuration for an existing field

1. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Siebel Domains.
2. In the Siebel Domains list, select the record for the Siebel Employee domain.
3. In the Siebel Domain Fields list, click Sync Fields.
4. In the Siebel Domain Fields list, use standard query techniques to display all records with Name set to Position.

   In some circumstances, more than one record may be displayed.
5. Find the Position record in which both Name and Field Identifier are set to Position, and set Field Type to Job Title in that record.
6. If another Position record exists in which Name is set to Position, but Field Identifier is set to EmployeePosition, select that record and click Delete.

Changing PIM Domain Configuration

The following procedure describes how to change a PIM domain configuration, as part of customizing SSSE. This task must be performed if you want to enable synchronization for a PIM field that SSSE does not currently synchronize. The examples described earlier in this chapter mapped Siebel fields to PIM fields that were already listed in the PIM Domain Fields list in the Siebel application, so this task is not required for those examples.

This task is a step in "Process of Customizing SSSE" on page 91.

This procedure involves Field Type settings for both Siebel and PIM domains. The following constraints exist:

- Synchronization requires mapping between Siebel fields and PIM fields.
- Mapping is only possible between fields that are listed in the Siebel Domain Fields list and the PIM Domain Fields list.
- For each field to be synchronized, the Field Type value for the Siebel Domain Field must match the Field Type value for the corresponding PIM Domain Field.

For more information about SSSE Siebel domain configuration, see "Changing Siebel Domain Configurations" on page 98.

To change a PIM domain configuration

1. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > PIM Domains.
2. In the PIM Domains list, select the domain to reconfigure.
3. In the PIM Domain Fields list, click New to create a record for the new PIM field, and complete the fields as shown in the following table.

Field	Comments
Name	Specify a name of your choosing for SSSE to use to identify this PIM field in a later configuration step. Make a note of the name you choose.
Field Identifier	Specify a name of your choosing for SSSE to use to identify this PIM field internally.

Field	Comments
Field Type	Select a value that describes the kind of data the PIM field holds, using non-technical terms that indicate the field's purpose, such as City or Last Name or Pager. Must match the Field Type value for the corresponding Siebel field. Available values are specified in the Siebel List of Values (LOV) PIMSI_FIELD_CLASS.
Data Type	Select a value that technically specifies the kind of data the PIM field holds, such as Boolean or Integer or Unicode String. Valid values depend on the PIM field you want to synchronize. **NOTE:** The Siebel List of Values (LOV) PIMSI_FLD_DATA_TYPE lists all the values that you can specify for Data Type, but many of the values in the LOV are not valid for any individual PIM field.

4 From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Configuration.

5 In the PIM Server Integration Configuration list, select the domain to reconfigure, such as Exchange Calendar, Exchange Contact, or Exchange Task.

6 In the Configuration Parameters list, click New and complete the fields as shown in Table 26 and Table 27.

NOTE: To fully specify a PIM field for synchronization, you may need to repeat this step several times, creating several records that specify the same value for Section but different values for Parameter and Value.

Table 26. PIM Field Configuration Parameters and Values (General Information)

Field	Comments
Section	Enter the value you specified for Name in Step 3 on page 100.
Parameter	Enter the name of the Exchange API that provides access to the PIM field you want to synchronize. For more information, see Table 27.
Value	Enter the name or other value that the Parameter API uses to identify the PIM field you want to synchronize. For more information, see Table 27.

Table 27. PIM Field Configuration Parameters and Values (Domain-Specific Information)

PIM Domain	Parameter	Values
Exchange Contact or Exchange Task	MAPIPropertyName	A MAPIPropertyName value is required for all Exchange Contact or Exchange Task fields. ■ For MAPI named properties, specify the identifier of the MAPI property. ■ For MAPI non-named properties, specify the 8-digit hexadecimal identifier of the MAPI field. For more information about MAPI named and non-named properties, see your MAPI documentation.
	PropertySetGUID	A PropertySetGUID value is required for Exchange Contact or Exchange Task fields that are MAPI named properties. Specify the Global Unique Identifier (GUID) of the property. If the named property is a custom field, specify the GUID value for PS_PUBLIC_STRINGS or PS_MAPI. If the named property is not a custom field, specify the existing GUID. For more information about property set GUIDs for MAPI named properties, consult your MAPI documentation.
	SubNamespace	A SubNamespace value is required for Exchange Contact or Exchange Task fields that are MAPI named properties. Valid values are Id and String.

Table 27. PIM Field Configuration Parameters and Values (Domain-Specific Information)

PIM Domain	Parameter	Values
Exchange Calendar	DAVPropertyName	If the field you are specifying can be defined using an existing WWW Distributed Authoring and Versioning (WebDAV) property name, specify that name. SSSE uses WebDAV for most Calendar information that travels from the Siebel database to Exchange (outbound data). For information regarding WebDAV properties, see your Exchange SDK documentation.
	ICALPropertyName	If the field you are specifying can be defined using an existing Internet Calendaring (iCal) property name, specify that name. SSSE uses iCal for most Calendar information that travels from Exchange to the Siebel database (inbound data). For information regarding iCal properties, consult RFC #2445.
	MAPIPropertyName	If the field you are specifying cannot be defined using an existing iCal property name for inbound data or an existing WebDav property name for outbound data, specify a MAPIPropertyName value for a MAPI named property. SSSE uses MAPI to synchronize any Calendar fields that cannot be defined using existing iCal or WebDav properties. For more information about MAPI named properties, see your MAPI documentation.
	Namespace	Specify a valid property namespace. For information regarding namespaces, see your Exchange SDK documentation.
	PropertySetGUID	A PropertySetGUID value is required for Exchange Calendar fields that are MAPI named properties. Specify the Global Unique Identifier (GUID) of the property. If the named property is a custom field, specify the GUID value for PS_PUBLIC_STRINGS or PS_MAPI. If the named property is not a custom field, specify the existing GUID. For more information about property set GUIDs for MAPI named properties, see your MAPI documentation.
	SubNamespace	A SubNamespace value is required for Exchange Calendar fields that are MAPI named properties. Specify the value String.

Example of Changing PIM Domain Configuration

This topic gives one example of changing PIM configuration settings as part of customizing SSSE. You may use this feature differently, depending on your business requirements.

In this example, you want to add the new Exchange field Pager to the Employee domain, which is equivalent to the PIM Domain IPM.Contact.

To change a PIM domain configuration

1 From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > PIM Domains.

2 In the PIM Domains list, select Exchange Contact.

3 In the PIM Domain Fields list, click New to create a record for the new PIM field, and complete the fields as shown in the following table.

Field	Value
Name	Pager
Field Identifier	PR_PAGER_TELEPHONE_NUMBER
Field Type	Pager
Data Type	Unicode String

4 From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Configuration.

5 In the PIM Server Integration Configuration list, select Exchange Contact.

6 In the Configuration Parameters list, click New and complete the fields as shown in the following table:

Field	Value to Enter
Section	Pager
Parameter	MAPIPropertyName
Value	0x3A21001F

Changing Domain Map Configurations

The following procedures describe how to change a Domain Map configuration, as part of customizing SSSE. The first procedure describes changing a map after designating a field for synchronization. The second procedure describes changing a map after modifying a field that is already synchronized.

This task is a step in “Process of Customizing SSSE” on page 91.

To change a Domain Map configuration after designating a field for synchronization

1. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Domain Map.
2. In the Domain Map list, select the domain in which you created a new field.
3. In the Field Map list, use standard query techniques to discover if a record already exists for this field.

   If such a record exists, then select it and click Delete.
4. In the Field Map list, click New to create a new record for the new field, and complete the fields as shown in the following table.

Field	Comments
Siebel Field	Enter the current name of the Siebel field to be synchronized. For example, for a newly created Siebel field called ManagerLogin, enter ManagerLogin.
PIM Field	Enter the current name of the PIM field to be synchronized. For example, the PIM field to be synchronized with the new Siebel field might be Manager Name.
LOV Translation Map	Select the name of the translation map that associates PIM values with Siebel LOV items for the new field. Scroll down to the Translation List to see the mappings that the selected map contains. For example, the Country map associates the Siebel Value of USA with the PIM Value of United States of America.
Key Field	Select the check box to direct SSSE to use the selected field to help uniquely identify any Siebel record in the selected domain, and to match that Siebel record with a corresponding PIM record.
Sync Enabled	Select the check box to allow the new field to be synchronized.

To change a Domain Map configuration after modifying a synchronized field

1. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Domain Map.
2. In the Domain Map list, select the domain in which you changed an existing field.

3 In the Field Map list, select the record for the field you changed, and modify the record's fields as needed to map between Siebel fields and PIM fields correctly.

For example, if you changed the name of the Siebel field EmployeePosition to just Position, you would make a corresponding change to the Siebel Field value in the Field Map list.

4 Inspect the Field Map list to determine whether the field is listed more than once, and delete any obsolete rows that you find for the same field.

The Field Map list should contain only one record for each field you are mapping.

About SSSE User Filtering

SSSE runs a user filtering algorithm periodically to determine which users have Siebel database records that have been changed and that need to be synchronized with Microsoft Exchange. For an implementation of SSSE that is not customized, the default user filtering configuration monitors changes in every table that is referenced by the domains and fields that are synchronized by default.

The default user filtering configuration involves 15 Siebel Business Components. Table 28 lists these Business Components and the fields and Objects associated with them. Each business component has a set of fields that record the true database update time of each row in a table or joined table. In addition, each Business Component has a User Id field that specifies the owner of each record in the Business Component.

Table 28. Default SSSE User Filtering Configuration

Business Object	Business Component	Fields Mapped to Database Last Update Time
PIMSI Sync Info	PIMSI Sync Info	DB_LAST_UPDATE
PIMSI User Filter Action	PIMSI User Filter Action	Activity Last Upd, Act Employee Last Upd
PIMSI User Filter Action	PIMSI User Filter Action Account	Account Last Upd
PIMSI User Filter Action	PIMSI User Filter Action Contact	Action Contact Last Upd
PIMSI User Filter Action	PIMSI User Filter Action Contact 2	Contact Last Upd
PIMSI User Filter Action	PIMSI User Filter Action Contact 3	Contact Last Upd
PIMSI User Filter Action	PIMSI User Filter Action Oppty	Oppty Last Upd
PIMSI User Filter Action	PIMSI User Filter Action Project	Project Last Upd
PIMSI User Filter Action	PIMSI User Filter Action SR	SR Last Upd
PIMSI User Filter Contact	PIMSI User Filter Contact	Contact Info Last Upd, Contact Last Upd, Party Last Upd
PIMSI User Filter Contact	PIMSI User Filter Contact Account	Account Last Upd
PIMSI User Filter Contact	PIMSI User Filter Contact Business Address	Address Last Upd

Table 28. Default SSSE User Filtering Configuration

Business Object	Business Component	Fields Mapped to Database Last Update Time
PIMSI User Filter Contact	PIMSI User Filter Contact Oppty	Oppty Last Upd
PIMSI User Filter Contact	PIMSI User Filter Contact Personal Address	Address Last Upd
PIMSI User Filter Contact	PIMSI User Filter Contact Position	Contact Position Last Upd

Each time the user filtering algorithm runs, a set of queries is issued to identify the users whose records have changed since the last filtering. For example, for particular values of *last_filtering_time* and *business_component_name*, the query finds information that can be described as follows:

`All User Ids in` *`business_component_name`* `where DB_LAST_UPDATE >=` *`last_filtering_time`*

Some Business Components have more than one database update time field. Separate queries are issued for each of these fields, sequentially. As a result, 18 queries are issued each time the user filtering algorithm runs. The union of query results is the set of users who have records that need to be synchronized with the Exchange Server.

Changing User Filtering Configurations

If your customization of SSSE does not involve synchronizing fields from a new table or a new joined table, then no user filtering configuration changes are required.

If your customization of SSSE does involve synchronizing fields from a new table or a new joined table, then the application developer must make sure that the user filtering configuration is adequate for detecting data changes in any new fields that SSSE will synchronize. For more information about the user filtering process, see "About SSSE User Filtering" on page 106. This task is a step in "Process of Customizing SSSE" on page 91.

The following procedure briefly describes how to change the user filtering configuration to detect changes made in new fields to be synchronized.

To change the SSSE user filtering configuration

1. Make sure that the table that contains the field to be synchronized has a DB_LAST_UPD column that records the true database update time.
2. Generate a script to populate the DB_LAST_UPD column when data in the table changes.
3. Modify an existing user filtering business component or create a new user filtering business component to include the DB_LAST_UPD column.
4. From the application-level menu, select Navigate > Site Map > Administration - PIM Server Integration > Configuration > PIM Server Integration Configuration.
5. In the PIM Server Integration Configuration list, select User Filter.
6. In the Configuration Parameters list, perform one of the following actions:

- For an existing user filtering business component, select the record where Parameter is set to the Business Component name, and add any new DB_LAST_UPD column to the Value field, using commas to separate multiple values.
- For a new user filtering business component, click New and complete the fields in the new record, as shown in the following table:

Field	Comments
Section	Enter the name of the Business Object for the new Business Component.
Parameter	Enter the name of the new Business Component.
Value	Enter DB_LAST_UPD.

7 Administering Siebel Server Sync

This chapter provides information about administering SSSE. It includes the following topics:

About Administering SSSE

This chapter provides information about the following aspects of administering SSSE:

- Setting Siebel and PIM domain properties
- Mapping Siebel and PIM domain fields to each other
- Mapping Siebel users and PIM users to each other
- Setting access levels
- Maintaining files
- Using logs
- Moving or deleting Exchange mailboxes of SSSE users

Many settings related to domains and mappings are preconfigured in SSSE; you do not need to perform some tasks unless you want to change the default settings. However, you must set user access permissions. All tasks in this chapter are performed from the Administration - PIM Server Integration screen of the Siebel application.

Establishing Domains for SSSE

This topic discusses Siebel domains and PIM domains for which you may need to configure some settings.

About Siebel Domains

SSSE is preconfigured with the following Siebel domains, which are designed to synchronize Siebel data with Microsoft Exchange Server data:

- Siebel Business Contact
- Siebel Calendar
- Siebel Employee
- Siebel Personal Contact
- Siebel To Do

CAUTION: Do not change the values of the Name or EAI Integration Object fields for the provided Siebel domains. PIMSI Engine functions properly using only the Siebel domains in the preceding list.

The current version of SSSE does not support the creation of new Siebel domains. However, following topics provide information about how to set certain characteristics for the preconfigured Siebel domains.

About PIM Domains

SSSE is preconfigured with the following PIM domains, which are designed to synchronize Microsoft Exchange data with the Siebel database:

- Exchange Calendar
- Exchange Contact
- Exchange Task

CAUTION: Do not change the Name or Domain Identifier of the provided PIM domains. PIMSI Engine functions properly using only the PIM domains listed previously.

Although domains are preconfigured, you must set default values and designate required fields, as described in “Setting Required PIM Domain Fields and Defaults” on page 114.

After the characteristics of Siebel domains and PIM domains are established, then the domain fields must be mapped and field-level synchronization must be set (see “SSSE Domain Mapping” on page 115).

Topics in This Section

Setting Siebel Domain-Level Synchronization

Domain-level synchronization establishes the highest allowable synchronization setting for all users and groups on the domain. You must set user-level and group-level synchronization to values that are equal to or lower than the domain-level synchronization. For more information about synchronization levels, see "SSSE Synchronization Options" on page 15.

To set domain synchronization

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Siebel Domains.
2. In the Siebel Domains list, select a record.
3. In the Domain Sync Support field, select a synchronization level for the domain.

   Table 29 describes the synchronization levels available for all Siebel domains, and Table 30 on page 111 lists the default synchronization levels for each domain.

4. Repeat Step 2 and Step 3 for each Siebel domain.

Table 29. Available Synchronization Levels for Siebel Domains

Synchronization Level	Description
Full Sync	Changes made in Microsoft Exchange Server and Siebel domains are synchronized with each other bidirectionally. **NOTE:** Do not choose Full Sync for the Employee domain, where the maximum supported level of synchronization is Export Only. Choosing Full Sync for the Employee domain can result in data corruption.
Export Only	Changes made in the Siebel domains are exported to Microsoft Exchange Server.
None	No synchronization takes place.

NOTE: Import Only synchronization level is not supported for any of the Siebel domains. For more information about this limitation, see "About the Limitation Against Import Only Synchronization Level" on page 112, later in this topic.

Table 30. Default Synchronization Level Values for Siebel Domains

Siebel Domain	Default Synchronization Level
Business Contact	Full Sync
Personal Contact	Full Sync

Table 30. Default Synchronization Level Values for Siebel Domains

Siebel Domain	Default Synchronization Level
Employee	Export Only
Siebel Calendar	Full Sync
Siebel To Do	Full Sync

About the Limitation Against Import Only Synchronization Level

Import Only synchronization level is not supported for any of the Siebel domains. The reason for this limitation is that there are potential data integrity problems if data is imported only from Exchange to Siebel applications.

This hazard to data integrity arises from the different methods the two systems use to store data. Siebel applications use a relational database, but Exchange Servers maintain data using an individual data store for each Exchange user.

As an example of the kind of issue that could arise, a Business Contact record in a Siebel application can be shared between multiple people in a team. Any update that one user makes to the Business Contact record in Siebel is immediately visible to other users, because all users are accessing a single record in the relational database. However, in Exchange, each user has his or her own set of Contact records. An update made to one user's Contact record is not reflected in other users' Contact information. If data was only imported from Exchange into Siebel applications, an update made by one user could be lost when another user makes a conflicting update. The following paragraphs describe in more detail how an example Business Contact record would be handled for different synchronization levels:

- When the synchronization level is set to Full Sync, then if someone changes synchronized data in either the Siebel application or Exchange, that change is reflected for other users in both the Siebel application and Exchange. For example, one member of a sales team might learn that a Business Contact's phone number had changed. All members of the team would soon see the new phone number in both the Siebel application and Exchange, regardless of where the change was made. Within a short period of time after a data change occurs, all users are working from the same updated data.
- When the synchronization level is set to Export Only, then a data change made in the Siebel application is reflected for other users in both Siebel and Exchange, but changes made in Exchange are visible only to the user who made the change, until such time as a later data change in the Siebel application overwrites the data in Exchange. So, a Business Contact phone number changed in the Siebel application would be visible to all team members, in both the Siebel application and Exchange. However, a phone number changed in Exchange would be visible only to the team member who changed it, and only until the next synchronization overwrites it with the value from the Siebel database. Again, within a short period of time after a data change occurs, all users are working from the same updated data.

- If you were allowed to set the synchronization level to Import Only, then a data change made in either Exchange or the Siebel application would be briefly reflected for all team members in the Siebel application. However, the change would be visible in Exchange only for the user who made the change. The change in the Siebel application would persist only until another user made a conflicting update. So, a Business Contact phone number changed either in the Siebel application, or in Exchange would be visible in the Siebel application to all team members, but only until the next synchronization of a team member who had a different phone number for the Business Contact, such as the old phone number. It would be possible for the phone number in Siebel to change repeatedly between the values held by different Exchange users, and for the Exchange values to continue to differ, so that team members would not be working from the same data. For this reason, the Import Only synchronization level is not supported.

Related Topics

"SSSE Synchronization Options" on page 15

Setting PIM Category Values for Siebel Domains

For each Siebel domain, an administrator can specify a value that a Microsoft Exchange record's Category field value must match, in order for SSSE to synchronize the record. The following procedure describes how to specify this value.

NOTE: If your Siebel implementation uses more than one language, a user can specify a Category value for an Exchange record in the user's regular working language. For a record that originates in the Siebel application, SSSE assigns a Category value to the corresponding Exchange record using the language that the administrator configured for the user in the User Map. For information about this language setting, see "Mapping Individual Users" on page 122.

To set the PIM Category Value for a domain

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Siebel Domains.
2. In the Siebel Domains list, select a record.
3. In the PIM Category Value field, enter the value you want to match against the Category field in Microsoft Exchange records.
4. Repeat Step 2 and Step 3 for additional domains, as needed.

Setting Required Siebel Domain Fields and Defaults

The administrator can set which Siebel domain fields require a value, and must specify a default value for each required field.

When a user creates a new Contact, Appointment, Employee, or To Do record in the Siebel application, the application cannot save the record until all required fields have a value. Similarly, if a user creates a new Microsoft Exchange Contact or Task record, SSSE synchronizes the record only if either the administrator has specified a default value to use when the field is empty, or if the Exchange record includes values to synchronize to all Siebel fields that require them.

The following procedure describes how to specify that a field requires a value, and how to provide a default value for that field.

To set required Siebel domain fields and defaults

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Siebel Domains.
2. In the Siebel Domains list, select the domain for which you want to set required fields.
3. In the Siebel Domain Fields list, select the field you want to make required.
4. Select the Required check box.

   NOTE: If Required field is not visible, to make it visible click Menu and choose Columns Displayed.

5. In the Default Value field, enter the value you want to use as the default value.

Setting Required PIM Domain Fields and Defaults

The administrator can set which PIM domain fields require a value, and must specify a default value for each required field.

When the user creates a new Contact, Appointment, Employee, or To Do in the Siebel application, SSSE synchronizes the record with the Exchange Server only if either the administrator has specified a default value to use when the field is empty, or if the Siebel record includes values to synchronize to all Exchange fields that require them.

NOTE: In any individual Exchange record, the user can change the value of the field from the default value to another value, but only an administrator can choose a different value to be assigned as a default.

The following procedure describes how to specify that a PIM field requires a value, and how to provide a default value for that field.

To set required PIM domain fields and defaults

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > PIM Domains.
2. In the PIM Domains list, select the domain for which you want to set required fields
3. In the PIM Domain Fields list, select the field you want to make required.

4 Select the Required check box.

NOTE: If Required field is not visible, to make it visible click Menu and choose Columns Displayed.

5 In the Default Value field, enter the value you want to use as the default value.

If the Default Value field contains the value Not Set, then the user must enter a string value; no default value is established.

SSSE Domain Mapping

The mapping of PIM domains and Siebel domains is preestablished in SSSE and must not be modified. However, you can configure the mapping of domain fields. You can also set field-level synchronization for each mapped field. This determines if the mapped field will be synchronized.

In the case of a synchronization conflict where SSSE cannot reconcile the data, the current version of SSSE always uses the data from the Siebel application.

The administrator can also set Key Fields. Key Fields are used to determine if records in PIM and the Siebel application are the same record.

Topics in This Section

Mapping PIM Domains and Siebel Domains

The mapping of a Siebel domain to a PIM domain (such as a Microsoft Exchange Server domain) allows SSSE to synchronize these two domains.

CAUTION: The mapping of the Siebel and PIM domains is preestablished in SSSE. Do not change the name of the Domain Maps or the default mapping of PIM and Siebel domains.

Table 31 shows the predefined mapping of Siebel and PIM domains.

Table 31. Default Mapping of Siebel and PIM Domains

Domain Map Name	Siebel Domain Name	PIM Domain Name
Siebel-Exchange Business Contact Map	Siebel Business Contact	Exchange Contact
Siebel-Exchange Calendar Map	Siebel Calendar	Exchange Calendar
Siebel-Exchange Employee Map	Siebel Employee	Exchange Contact

Table 31. Default Mapping of Siebel and PIM Domains

Domain Map Name	Siebel Domain Name	PIM Domain Name
Siebel-Exchange Personal Contact Map	Siebel Personal Contact	Exchange Contact
Siebel-Exchange Task Map	Siebel To Do	Exchange Task

About Resolving Synchronization Conflicts

If data in the Siebel application and Microsoft Exchange Server has been modified in such a way that SSSE cannot synchronize the differences, the current version of SSSE always resolves the conflict by using the data from the Siebel application.

An example of a synchronization conflict might be that the Status of an Exchange Task was set to a value that differs from the value of the corresponding Siebel To Do item. If the status was updated at approximately the same time, thereby falling within the same synchronization cycle, SSSE has no way to determine which update should be applied, and automatically uses the data from the Siebel application.

Mapping Fields

Administrators can map individual fields between the Siebel and PIM domains. This mapping determines which fields in the Siebel application are synchronized with which fields in Microsoft Exchange Server and vice versa.

Administrators can turn synchronization on or off for each individual mapped field.

NOTE: In SSSE, some editable Exchange fields are mapped to Siebel pick list fields. If data for these fields is entered in Microsoft, typographical errors and case mismatches can cause synchronization problems. To minimize this possibility, you can set the Siebel pick list fields to be case insensitive. For information about enabling field-specific case insensitivity, see *Applications Administration Guide*.

To create a new field mapping

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Domain Map.
2. In the Domain Map list, select a record.
3. In the Field Map list, click New, and then fill in the fields for the new record using the following values.

Field	Description
Siebel Field	Select a Siebel field.
PIM Field	Select a PIM field.
LOV Translation Map	Select an appropriate List of Values (LOV) translation map.

Field	Description
Key Field	Select this check box if you want this field to be a key field. See "Setting Key Fields" on page 117.
Sync Enabled	Select this check box if you want this field synchronized. For more information about synchronizing specific fields, see "Setting Field-Level Synchronization" on page 117.

Setting Key Fields

The first time SSSE synchronizes a particular record, SSSE uses Key fields to determine if a Contact, Calendar Appointment, Employee, or To Do in the Siebel application is the same record as in Microsoft Exchange Server and vice versa. If the values in all key fields of a record match, then SSSE assumes that the record is the same record, and SSSE synchronizes the record between the Siebel application and Exchange. If all key fields do not match, then SSSE assumes the record is a unique record.

The following procedure describes how to set key fields.

To set key fields

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Domain Map.
2. In the Domain Map list, select a record.
3. In the Field Map list, select a record.
4. Select the Key Field check box.

Setting Field-Level Synchronization

Administrators can turn synchronization on or off for each individual mapped field. You do not need to unmap fields to disable synchronization.

To enable or disable field synchronization

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Domain Map.
2. In the Domain Map list, select a record.
3. In the Field Map list, select a record.
4. Select the Sync Enabled check box if you want synchronization enabled for this field. Clear the check box if you want synchronization disabled.

Setting SSSE Group and User Access Controls

To allow users to synchronize between Microsoft Exchange Server and the Siebel application, you must map each PIM user to a Siebel user login, and then enable synchronization for the user. Optionally, you can set a synchronization level for each of a user's Siebel domains (Business Contact, Personal Contact, Employee, or To Do). If you do not set the synchronization level for a user, then SSSE uses the domain synchronization level.

You can also set the synchronization level for a group. A *group* is any Organization, Position, or User List defined in the Siebel application.

Topics in This Section

Setting User-Level Synchronization

User-level synchronization allows you to set the synchronization level separately for each of a user's Siebel domains except Calendar (Business Contact, Personal Contact, Employee, or To Do). You can also use user-level synchronization to give a particular user a different synchronization level from other users.

You cannot set user-level synchronization higher than domain-level synchronization. For example, the user cannot have Full Sync privileges if the overall domain is limited to Export Only. If the domain-level synchronization is set to None, then no users or groups are able to synchronize on that domain.

No user-level synchronization control is available for the Calendar domain. The administrator sets Calendar synchronization at the domain level.

NOTE: In addition to setting each user's synchronization level, you must enable each user's synchronization or SSSE cannot synchronize records for that user. For more information about enabling synchronization, see "Enabling or Disabling User Synchronization" on page 123.

To set user-level synchronization

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Sync Access Control > User Level Access Control.
2. In the User Level Access Control list, select a record for a particular user.
3. In the User-Level Access Control list (lower list), click New, and then fill in the fields as shown in the following table.

Field	Description
Siebel Domain Name	Select Siebel Business Contact, Siebel Employee, Siebel Personal Contact, or Siebel To Do.
Administrator Override	When selected, user-level synchronization is preserved and used for the selected user, even if that user belongs to a group for which an administrator has set a different group synchronization level. Selected by default. It is recommended that you leave this setting as is. For more information about group synchronization levels, see "Setting Group-Level Synchronization" on page 120.
Admin Sync Level	Select Full Sync, Export Only, or None. This sets the maximum synchronization level that can be set for this user and domain.
Allow User Customization	Leave check box cleared. User customization of the synchronization level is not supported in this release of SSSE.
Allow MVG Creation	Select the check box (On).
Visibility Type	Determines whether the data that the user can synchronize is limited to records visible in specified views. The available values for each domain are as follows: ■ **Business Contact Domain.** Available Visibility values are All, Sales Rep, or no value (empty). Default value is Sales Rep. ■ **Employee Domain.** Available Visibility values are All or no value (empty). Default value is All. ■ **Personal Contact Domain.** Available Visibility values are Personal or no value (empty). Default value is Personal. ■ **Tasks Domain.** Available Visibility values are Personal or no value (empty). Default value is Personal. For information about the meanings of these Visibility values, see Table 32 on page 120.

4. Repeat Step 3 on page 119 for each additional domain where you want to specify user-level access for the selected user.

Table 32. Visibility Type Value Descriptions

Visibility Value	Description
All	The user can synchronize any of the data that is visible to them in the selected domain and that is set up for synchronization by the Administrator. This Visibility value is available for the Employees and Business Contact domains.
Sales Rep	The user can synchronize data in the selected domain based on his or her position. If the data is associated with the user's position or with a direct report's position, then the data is visible to the user in the Contacts view, and the user can synchronize that data. For example, if the Sales Team field for a Contact record lists anyone who has the same position as the user or one of the user's direct reports, then the data in that Contact record is visible to the user in the My Contacts view. This Visibility value is available for the Business Contacts domain, only.
Personal	The user is limited to synchronizing data in the selected Domain that is specifically marked as personal (non-business) data. No other user can view this data, regardless of position. This Visibility value is available for Tasks and Personal Contacts domains. Data to be synchronized must appear in the user's My Activities or My Personal Contacts views, depending on the selected domain, and must have the Private check box selected. Personal visibility is also appropriate for the Calendar domain, where an administrator must set the synchronization level settings at the domain level, rather than the user level. **NOTE:** The Personal value cannot be used for the Employees and Business Contacts domains.
(Empty field)	If the Visibility Type field is left blank, SSSE uses the default Visibility Type for the selected domain.

NOTE: The Visibility setting described in this topic does not affect which records are visible to the user in the application; it only affects which records can be synchronized.

Related Topics

"SSSE Synchronization Options" on page 15

"Setting Siebel Domain-Level Synchronization" on page 111

Setting Group-Level Synchronization

In addition to the ability to set synchronization level by individual user, you can set synchronization level for a group of users. A group is any Organization, Position, or User List defined in the Siebel application.

Group synchronization is a mechanism for setting the user synchronization level for multiple users. After you set synchronization values for the group, SSSE propagates the values to the members of the group, thereby setting the individual user's synchronization values.

NOTE: Make sure that the user's synchronization is enabled or that user cannot synchronize, regardless of the group synchronization level that is set. For more information about enabling synchronization, see "Enabling or Disabling User Synchronization" on page 123.

CAUTION: SSSE applies group-level synchronization settings only to members of the selected group who do not have Administrator Override selected in the User Level Access Control list. For more information about the User Level Access Control list, see "Setting User-Level Synchronization" on page 118.

To set group-level synchronization

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Sync Access Control > Group Access Control.
2. In the User Group Access Control list, click New, and then fill in the fields as shown in the following table.

Field	Description
Party Name	Select the name of a party.
Party Type Code	Automatically set to the correct value.
Siebel Domain Name	Select Siebel Business Contact, Siebel Employee, Siebel Personal Contact, or Siebel To Do.
Admin Sync Level	Select Full Sync, Export Only, or None. This sets the Admin Sync Level for each user in the group.
Allow MVG Creation	Select the check box (On).
Allow User Customization	Leave check box cleared. User customization of the synchronization level is not supported in this release of SSSE.
Status	Is automatically set to Pending, which means that the changes are pending propagation to the users in the group.

3. Click the Propagate Changes button.

   The group settings are propagated to each user that is a member of the group. This overwrites any user settings that might already exist, provided that Administrator Override is not selected for those users. The Status field is cleared, indicating that the changes were successfully propagated.

Related Topics

"Setting User-Level Synchronization" on page 118

Mapping Individual Users

To allow synchronization between the Siebel application and a PIM, you must map each Siebel user to a PIM user, and then enable synchronization for the user.

To map a Siebel user to a PIM user

1 From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Sync Access Control > User Map.

2 In the User Map list, click New, and then fill in the fields as shown in the following table.

Field	Description
Siebel User Login	Enter the user's Siebel application login.
PIM User Identifier	Enter the user's Microsoft Exchange Server email address. This entry is in the form <user>@<company.xxx> (Example: jbrown@somecompany.com). **NOTE:** This value must also match the email address in the user's Siebel Employee record, with the case matching exactly. If necessary, the value can differ in case from the user's Exchange email address, but if the match with the Siebel Employee record is not exact, calendar synchronization for the user fails.
PIM Server Type	Select Exchange 2000.
Language	Select a language.
Sync Enabled	Select this check box to enable synchronization for this user.

Related Topics

"Mapping Multiple Users" on page 122

"Setting User-Level Synchronization" on page 118

Mapping Multiple Users

SSSE provides an automated method for mapping multiple users to allow synchronization between the Siebel application and Microsoft Exchange Server. You can use this method to map all employees in a Siebel deployment, for example. The Map User button finds and maps Siebel user login names to Exchange email addresses. After you map the users, you must enable synchronization for each user.

To map multiple users

1 From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Sync Access Control > User Map.

2 In the User Map list, click Map User.

The PIM Server Integration User Map dialog box appears.

3 Fill in the fields as shown in the following table, and then click Map Users.

Field	Value
Business Object Name	Select a business object. (Example: Employee).
Business Object Component	Select a business component. (Example: Employee).
PIM Login Field Name	Email Addr.
Siebel Login Field Name	Login Name.
PIM Server Type	Exchange 2000.
Default Language	Select a language. (Example: English-American).

The mapped users appear in the User Map list.

4 From the Edit menu, choose Select All.

5 From the Edit menu, choose Change Records.

6 Under 1st Field to Change, in the field called Field, select Sync Enabled.

7 Under 1st Field to Change, in the Value field, type Y, and then click OK.

The Sync Enabled check box is selected for all of the highlighted records.

Enabling or Disabling User Synchronization

The administrator can enable or disable synchronization for each user individually.

To enable or disable user synchronization

1 From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Sync Access Control > User Map.

2 In the Sync Access Control list, select a record.

3 In the User Map list, select a record.

4 Select the Sync Enabled check box to enable synchronization for this user. Clear the check box to disable synchronization.

About SSSE File Maintenance

SSSE stores information about data changes to synchronize in the S_SD_SYNC_INFO table. Due to technical limitations, this information is collected for all users, not just users for whom synchronization has been enabled. Therefore, this table can accumulate a large number of rows in a short time.

SSSE automatically removes rows that are associated with *sync-enabled* users (users who have synchronization enabled) from the S_SD_SYNC_INFO table when the applicable synchronization takes place. SSSE also automatically removes rows that are associated with users who have never synchronized, on a schedule that is determined by the configuration parameter DispCycleCount for GC (Dispatcher Cycle Count for Garbage Collection).

Rows are preserved indefinitely for users who are not currently sync-enabled, but who have synchronized in the past. Preserving these rows allows for correct synchronization if synchronization is later reenabled for one of the users in question. However, if a large number of users have synchronization temporarily disabled, SSSE performance can decline as the size of the S_SD_SYNC_INFO table grows.

For best results, it is recommended that you minimize the number of users who have synchronization disabled after previously synchronizing.

CAUTION: Do not delete rows from the S_SD_SYNC_INFO table manually, as this can cause data corruption. You can help control the size of the S_SD_SYNC_INFO table by deleting User Map records for users who have previously synchronized but are not currently sync-enabled.

If you want to reenable synchronization for such users at a later time, you must create a new User Map record for each such user. When you add a User Map record for a user and reenable synchronization for that user, SSSE automatically performs a new initial extract operation for that user. During this initial extract, Exchange contact records are checked for duplication before being added as Siebel records. Unfortunately, technical constraints do not allow Exchange calendar records to be checked for duplication, so a repeat of an initial extract for a given user is likely to result in duplicate Siebel Calendar records. For more information about working with the User Map, see "Mapping Individual Users" on page 122.

For more information about setting the DispCycleCount for GC configuration parameter, see "Tuning SSSE Siebel Profile Parameters" on page 73. For more information about redoing an initial extraction for a previously synchronized user, see "Reinitializing an SSSE User" on page 124.

Reinitializing an SSSE User

From time to time, you may need to reinitialize extraction for an SSSE user. For example, if a user who has previously synchronized is currently not sync-enabled, a new initial extraction must be done for that user before synchronization is reenabled for that user.

The following procedure describes how to reinitialize such a user.

CAUTION: During the initial extract that follows reinitialization, Exchange contact records are checked for duplication before being added as Siebel records. Unfortunately, technical constraints do not allow Exchange calendar records to be checked for duplication, so a repeat of an initial extract for a given user is likely to result in duplicate Siebel Calendar records.

To reinitialize an SSSE user

1. Navigate to Site Map > Administration - PIM Server Integration > Sync Access Control > User Map.
2. In the User Map list, select the record for the user to be reinitialized, and then click Delete.
3. Create a new row and remap the user, as described in "Mapping Individual Users" on page 122.
4. Enable synchronization for the user, as described in "Enabling or Disabling User Synchronization" on page 123.

About SSSE Log Files

Log files for SSSE reside in the siebsrvr\log directory, along with log files for other Siebel software modules.

The amount of information that is logged can be tuned by adjusting log level settings. By default, multiple log files are created. For information about how to tune log levels or to consolidate log files, see "Modifying Log File Settings" on page 70.

In particular, the log file for the Exchange Connector records the following information, which can be useful during troubleshooting:

- Exchange Connector successfully establishing a connection to the Exchange Server
- Exchange Connector processing domains for each user, including the number of records extracted for each domain for each user
- Exchange Connector detecting a conflict

Other useful information that can be logged includes the following:

- PIMSI Engine and PIMSI Dispatcher startup and shutdown information is captured in the log file whose name is of the form siebel.*machineName*.log, where *machineName* is the name of the machine where PIMSI Engine or PIMSI Dispatcher runs.
- Several statements are typically logged regarding the beginning and ending of each extract session. This information is captured in log files that have names of the forms PIMSIEng*xxxxx*.log and PIMSIDispatcher*xxxxx*.log.

For examples of SSSE log messages, see Table 33.

Table 33. Typical SSSE Log Messages

SSSE Event	Example of Log Message for Event
User Extract Session Start	`PIMSIEngSvc PIMSIInformational 4 0 2004-10-14 20:55:14 BatchMgr: Starting extract for user PIMSI1120`
Extract data from Exchange Start	`PIMSIEngSvc PIMSIInformational 4 0 2004-10-14 20:55:15 SBL-MBL-51026: Extracting Domain IPM.Contact for User PIMSI1120.`
Extract data from Exchange End	`PIMSIEngSvc PIMSIInformational 4 0 2004-10-14 20:55:30 Connector: CSSExchangeConnector::ExtractUser (): Extracted 1 records for user pimsi1120@pimsisiebel.com for domain IPM.Contact`

Table 33. Typical SSSE Log Messages

SSSE Event	Example of Log Message for Event
Extract data from Siebel Start	`PIMSIEngSvc PIMSIInformational 4 0 2004-10-14 20:55:51 SBL-MBL-51026: Extracting Domain PIMSI Intermediate Business Contact for User PIMSI1120.`
Extract data from Siebel End	`PIMSIEngSvc PIMSIInformational 4 0 2004-10-14 20:55:51 BatchMgr: Extracted 2 records for user PIMSI1120 for domain PIMSI Intermediate Business Contact`
Import an Exchange record to Siebel	`PIMSIEngSvc PIMSIDebug 5 0 2004-10-14 20:55:47 (ssuserinit.cpp (1002)) SBL-MBL-51027: Pushed row: RowID=7aac6063c0a8fd42806472a6ec618a0400000123a203 , User=pimsi1120@pimsisiebel.com, Domain=IPM.Contact.`
Export a Siebel record to Exchange	`PIMSIEngSvc PIMSIDebug 5 0 2004-10-14 20:55:55 (ssuserinit.cpp (4696)) SBL-MBL-51027: Pushed row: RowID=42-5AUWH , User=PIMSI1120, Domain=PIMSI Intermediate Business Contact.`
User Extract Session End	`PIMSIEngSvc PIMSIInformational 4 0 2004-10-14 20:55:57 SBL-MBL-51003: Successfully extracted domain All Domains for user PIMSI1120.`

Table 34 lists SSSE error messages that do not indicate a major problem; that is, these errors do not prevent the user's synchronization session from completing, and the following synchronization session for that user ordinarily will not repeat the same error messages.

Table 34. SSSE Error Messages That Can Accompany Successful Synchronization

Logged Error Message	Cause of Error	Error Codes
Failed to process the unresolved attendees for Siebel Row: *row_number*, Siebel Domain: *domain_name*.	SSSE cannot save the unresolvable attendees for the appointment in the indicated row	None
One or more records with the same key already exists.	SSSE found a duplicate row in the Siebel database.	IDS_ERR_EAI_SA_MULTIPLE_MATCH IDS_ERR_EAI_SA_DUP_CONFLICT SSASqlErrDupConflict2 SSASqlErrDupConflict
One or more required fields of this record are empty.	One of the required fields for this record is empty and there was no default configured.	IDS_ERR_EAI_SA_MISSING_REQ_FIELD IDS_WRN_EAI_SA_DML SSASqlErrReqField

Table 34. SSSE Error Messages That Can Accompany Successful Synchronization

Logged Error Message	Cause of Error	Error Codes
This record cannot be deleted because it does not exist.	SSSE cannot delete a record because it is not in the Siebel database. (It was probably deleted earlier.)	IDS_ERR_EAI_SA_BC_NO_DATA SSASqlErrRecordDeleted
Value entered for one or more fields of this record is not compatible with their declared Data Type.	The value for one of the fields in this record is not of the correct data type for the field.	SSASqlErrValidation
Number of characters entered for one or more fields of this record exceeds their declared Data Length.	A text field for this record has more characters than the Siebel database field can handle.	SSAOMErrDataTooLong SSASqlErrBindVarOverflow1
One or more fields of this record has characters that are not compatible with this DB Code Page.	At least one of the fields in this record is not compatible with the code page data base.	SSASqlErrUnicodeToCodePage SSASqlErrUnicodeConversion
Alarm flag is checked for past appointment.	This appointment is scheduled in the past and has an alarm flag checked.	SSAOMErrAlarmTriggerTimePassed
One or more picklist fields of this record have a value that is not part of the bounded picklist of values.	A value that SSSE is trying to use for a picklist field is not available in the picklist for the field.	SSAOMErrBoundedPick IDS_ERR_EAI_SA_PICK_VALIDATE

About Moving or Deleting Mailboxes for SSSE Users

From time to time, you may need to move users' Exchange mailboxes from one Exchange server to another, or you may need to delete a user's Exchange mailbox. When this situation occurs for an SSSE user, simply follow Microsoft's guidelines for moving or deleting a user's Exchange mailbox. No additional steps are needed for SSSE users.

8 Using Siebel Server Sync

This chapter describes the common end-user tasks for using SSSE. It contains the following topics:

About Using SSSE

SSSE allows you to synchronize Siebel application data with supported Personal Information Manager (PIM) files, such as Microsoft Exchange Server, the server for Microsoft Outlook client software. The types of data available for synchronization in the Siebel application are My Calendar, My Activities, My Contacts, My Personal Contacts, and Employees information.

Your SSSE administrator defines who is able to synchronize between Exchange and the Siebel application, and what types of data users are able to synchronize. After the administrator sets the necessary synchronization settings, the synchronization of data between the Siebel application and Exchange is automatic.

Scenarios for SSSE

This topic gives some examples of how SSSE may be used. You may use SSSE differently, depending on your business model.

Scenario for Scheduling a Meeting Using the Calendar

A Siebel application user creates a new Calendar appointment in Outlook and invites three employees to this appointment using Outlook scheduling capabilities. Upon saving the record, SSSE automatically creates the new appointment in the user's Siebel Calendar. In addition, the record is written to the Outlook Calendar of the meeting invitees. One of the invitees cannot attend the meeting and deletes the meeting from his Outlook Calendar. SSSE then removes that user from the list of employees associated with this Calendar record in the Siebel application.

Scenario for Recording a Task or To Do Activity

A Siebel application user creates a new Task in Microsoft Outlook. Upon saving the Task, the Task is written to the Siebel application server, and is visible as a To Do Activity record in the user's My Activities view. Later, the user changes the description of this Activity in the Siebel application. Upon saving the changes, the Siebel to Outlook Connector updates the task in the user's Outlook database on the Microsoft Exchange Server.

Scenario for Storing Personal Contact Information

A Siebel application user who has been using SSSE for some weeks creates a new contact in the My Personal Contacts view of his Siebel application, and uses the Add To Sync List command to request that the contact record be synchronized. On his next synchronization, PIMSI Engine and the Siebel to Microsoft Exchange Connector automatically write the record to the user's Contacts folder on the Exchange Server, and assign the Category value of Siebel Contact to the record. The user can then access the contact information from Microsoft Outlook. To indicate that this is a personal contact, the contact is marked Private in Outlook Contacts.

Scenario for Storing Business Contact Information

A Siebel application user creates a My Contacts record in the Siebel application and uses the Add To Sync List command to request that the contact record be synchronized. On his next synchronization, the Siebel to Exchange Connector writes the record to the user's Outlook Contacts list and assigns it the Category value of Siebel Contact. The user then changes the spelling of the contact's last name in Outlook. SSSE writes the change to the Siebel application. After the record is written to the Siebel application, all SSSE users that appear on the access list have the change propagated to their Outlook Contacts list.

Scenario for Accessing Employee Information

A Siebel application user would like certain Employees in the Siebel application to also appear in his Outlook Contacts list. The user uses the Add To Sync List command to request that the Employee records be synchronized. On the next synchronization, the Siebel to Exchange Connector writes those records to the user's Outlook Contacts list. Each exported Employee record is assigned a Category value of Employee in Outlook Contacts.

About Using SSSE with Calendar Records

The SSSE administrator sets the Calendar synchronization level to either Full Sync, Export Only, or None. No Calendar synchronization control is available to the end user; the synchronization level that the administrator sets applies to all users who have synchronization enabled. After SSSE initiates synchronization for a given user, all Calendar synchronization for that user is automatic; no user action is required.

The following task descriptions assume that Calendar synchronization is set to Full Sync.

Topics in This Section

Related Topics

"SSSE Synchronization Options" on page 15

Factors That Determine Calendar Synchronization

Assuming that the administrator has enabled synchronization for the relevant user, then whether or not a Calendar record is synchronized depends on the following factors:

- The synchronization level that the administrator sets (Full Sync, Export Only, or None)
- The value of the following configuration parameters, which the administrator also sets:
  - ExtractStartDate (in MM/DD/YYYY format)
  - ExtractStartDateFormat

  If a nonrepeating calendar item has a Planned Completion Date that is earlier than the value of the ExtractStartDate parameter, that item is not synchronized. If a repeating calendar item has no ending date, or an ending date that is later than the value of the ExtractStartDate parameter, then that item is synchronized.
- Whether a calendar record that is created in Siebel has a Planned Start and Completion date (a Siebel Calendar record without these dates will not synchronize in Exchange
- Whether a calendar record that is created in Siebel has Display In set to Calendar and Activities (this Display In value is required for synchronization)
- Whether the user archives their Exchange Calendar records. The process of archiving an Exchange record, whether automatic or manual, stores the record externally and deletes the record from the active data store. SSSE treats this operation as a deletion in Outlook, which typically leads to the deletion of the corresponding Siebel record at the next synchronization.

About Activities and Calendar Records

In Siebel applications, To Do and calendar records are Activity records. From the perspective of Siebel applications, calendar records are a subset of activity records. Therefore, each calendar record is considered to be a type of activity record. When viewed in the Siebel application, all activity records (including records classified as calendar items) appear in the Activities view. SSSE, however, allows you to synchronize calendar records and activity To Do records separately. Separate treatment is necessary for PIMs (such as Microsoft Exchange) that treat calendar records and To Do records as distinct record types.

The value in the Display In field determines how a new Siebel Activity record is synchronized with Microsoft Exchange Server. Each Siebel Activity record is treated in one of three ways—it is synchronized as a Calendar record, it is synchronized as a Task, or it is excluded from synchronization. Table 35 summarizes how activities created in the Siebel application are synchronized based on the value of the Display In field.

Table 35. Synchronization of Siebel Activities Records with Microsoft Exchange Records

Siebel Display In Value	Microsoft Exchange Record Type	Record Synchronized as
Calendar and Activities	Calendar	Calendar
To Do and Activities	Task	Task
Activities Only	Not Applicable	Not synchronized

Similarly, when users create items in Outlook that SSSE synchronizes with a Siebel application, SSSE automatically sets the Display In field to the appropriate value depending on the PIM record type. Table 36 summarizes how the Display In field is set when a record that was created in Outlook is synchronized with the Siebel application.

Table 36. Synchronization of Microsoft Exchange Records with Siebel Activities Records

Microsoft Exchange Record Type	Siebel Display In Value	Record Synchronized as
Task	To Do and Activities	To Do
Calendar	Calendar and Activities	Calendar

When synchronization adds an Exchange Task to the Siebel application, SSSE sets the Display In field to To Do and Activities. If a user subsequently changes the Siebel Display In field to Calendar and Activities, the activity appears in the Siebel Calendar. During the next synchronization, SSSE deletes this item from the Exchange Task list and adds it to the Exchange Calendar.

Creating, Modifying, or Deleting an Appointment

You can add a new appointment, change an existing appointment, or remove an appointment in either the Siebel application or Outlook. Synchronization is automatic.

Automatic or manual archiving of an Outlook stores the record externally and deletes the record from the active data store. SSSE treats this operation as a deletion in Outlook, which typically leads to the deletion of the corresponding Siebel record at the next synchronization.

In the specific case where the Owner adds a Contact attendee to an appointment in the Siebel application, or removes a Contact attendee from an appointment in the Siebel application, the change is synchronized in the participant lists of the corresponding Exchange calendar items for all sync-enabled participants.

NOTE: If an Owner removes a participant from a recurring appointment in Exchange, the change is not synchronized in the Siebel application, but neither does the older Siebel data overwrite the change in Exchange. If the Owner changes appointment header information (such as Start Date, End Date, and Description) in Exchange, these header changes are synchronized in the Siebel application.

Creating or Modifying a Recurring Appointment

The Siebel application does not support the same recurrence options as Outlook. For example, the Siebel application does not support appointments that occur every other week. The Siebel application supports only a Meeting Repeat frequency of every day, week, month, quarter, and year.

If you set a recurrence that is not supported by the Siebel application, then, when the appointment is synchronized, SSSE creates individual read-only appointments in the Siebel application to represent individual instances of a recurring appointment. However, there is a limit to the number of individual read-only appointments that can be created by synchronizing an unsupported recurrence pattern. This limit is determined by the value of the Max Recurring Instances setting for the Siebel Calendar domain.

If you modify a particular instance of a recurring appointment in Outlook, you cannot modify that appointment in the Siebel application after it is synchronized. However, you can continue to modify the appointment in Outlook. If you modify all instances of a recurring appointment in Outlook, then you can continue to modify the appointment in either Outlook or the Siebel application.

Scheduling an All-Day Appointment

The Siebel Calendar does not have a field corresponding to the All Day Event check box in Microsoft Outlook. To allow synchronization of Outlook All Day appointments, SSSE uses the following conventions:

- When SSSE synchronizes an appointment from Microsoft Outlook with the Siebel Calendar, SSSE checks starting and ending dates and times and Outlook time zone settings to determine whether or not it is an all day appointment. If so, SSSE records the event as having a starting date and time and an ending date and time that correspond to the values that are displayed in the Outlook Active Appointments view. The end date that Outlook displays in the Active Appointments view is one day greater than the end date that Outlook displays in an open appointment window with the All day event check box selected. If the Siebel application and Outlook display the same time zone, then both applications show a start time of 12:00 AM and an end time 12:00 AM for an all day appointment. If the two applications display different time zones, then the Siebel application shows different start and end time values based on the time zone configured for the Siebel user. For example, an all day appointment might show starting and ending times of 3:00 AM instead of 12:00 AM, if the Siebel application were using a time zone 3 hours away from the time zone used by Outlook.

- An appointment that originates in a Siebel application displays as an Outlook All Day Event after synchronization only if all of the following conditions are met:
  - The Siebel appointment must have a start date and time and an end date and time that span exactly one or more 24 hour periods. For example, start date-time is 12:00 AM Jan 1, 2006 and end date-time is 12:00 AM Jan 3, 2006.
  - The end date must be greater than the start date. An end date that is the same as the start date does not display in Outlook as an All Day Event because it spans less than a 24 hour period. An All Day Event must span at least one 24 hour period.
  - The start and end time values that appear in the Outlook Active Appointments view must both be 12:00 AM The display values for the Outlook appointment date and time fields are dependant on the time zone configured for Outlook. Therefore, the start and end time values may display as 12:00 AM in one time zone but other time values in other time zones. If the Outlook and Siebel applications are both configured to the same time zone then 12:00 AM start and end times in one application display as 12:00 AM start and end times in the other.
- A single All Day Event appointment can extend over one or more days whether it originated in a Siebel application or in Outlook.

Adding an Attachment to an Appointment

If you add an attachment to an Outlook calendar appointment, the attachment is not synchronized with the Siebel application because SSSE does not currently support synchronization of calendar attachments.

The attachment remains attached to your Outlook appointment even if you change appointment details in the Siebel application and resynchronize with Outlook.

Calendar Appointments with Multiple Attendees

The following paragraphs describe how SSSE handles Calendar appointments that have multiple Attendees in Microsoft Exchange or multiple Participants in Siebel applications.

Calendar Items Created in Siebel Applications

If an SSSE user who is enabled for synchronization creates a Calendar item in a Siebel application, that user is listed in the Owner field of the Calendar Detail form for the item.

If the Calendar item has multiple Participants, all the Participants who are Employees are listed in the Employees field in the Calendar Detail form.

If any participants are Contacts, rather than Employees, they are listed in the Contacts field in the Calendar Detail form.

Employee participants can view the original Calendar item in their Siebel Calendars.

Calendar Items in Siebel Applications Synchronized with Microsoft Exchange

When SSSE synchronizes a Calendar item that was created in a Siebel application with Microsoft Exchange, SSSE maps the value of the Siebel Owner field to the Exchange Organizer field.

SSSE maps the values listed as Employees and Contacts in the Siebel Calendar Detail Form to Exchange Attendees.

NOTE: Only the Employees and Contacts that have email addresses are synchronized to Exchange as attendees on the appointment.

SSSE writes the Siebel Calendar appointment directly to the Exchange Calendar folders of the sync-enabled participants.

Special Handling When Siebel Owner Is Not Enabled to Use SSSE

If a Siebel user who does not have SSSE synchronization enabled creates a Siebel Calendar item that includes SSSE-enabled participants, the following facts are true:

- The Siebel Calendar item is synchronized in Microsoft Exchange for all Siebel Employee participants who have synchronization enabled. If the owner modifies the item in the Siebel application, the changes are synchronized for these same participants.
- The Siebel Calendar item is not synchronized in Exchange for nonemployee Contacts, because synchronization cannot be enabled for Contacts.
- Provided that email addresses are correctly configured, the Owner for the Siebel Calendar item is synchronized to be the Exchange Organizer for the sync-enabled participants' Exchange Calendar items, even if the Siebel Owner does not have synchronization enabled.
- If any sync-enabled attendee modifies the calendar item in Exchange (for example, to change the Start Date or Subject), the change is synchronized in the Siebel application, where it is visible to all Siebel participants, including the item Owner.

Calendar Items Created in Microsoft Exchange

If an SSSE user who is enabled for synchronization creates a Calendar appointment in Microsoft Outlook, that user is listed in Outlook as the Organizer of the appointment.

Additional participants are listed as Required Attendees or Optional Attendees, regardless of whether the attendees are Employees or Contacts.

A copy of the original Calendar appointment is stored for each attendee who is using Microsoft Exchange client software. From this point on, any attendee can modify his or her own copy of the appointment. The attendee can choose whether or not to notify other attendees (including the organizer) of the change to their copy of the appointment.

If other attendees are notified of a change to a calendar item, the notifications provide information about the change that one attendee has made, but the notification has no effect on the data stored in other attendees' copies of the appointment.

Calendar Items in Microsoft Exchange Synchronized with Siebel Applications

When SSSE synchronizes a Calendar appointment that was created in Microsoft Outlook with a Siebel application, a corresponding Siebel Calendar item is created as soon as SSSE synchronizes any SSSE-enabled participant for the appointment.

At synchronization, the value of the Exchange Organizer field is mapped to the value of the Siebel Owner field, provided that the Organizer has a corresponding Employee record in the Siebel application.

The values listed as Exchange Attendees are mapped to the Employees or Contacts fields in the Siebel Calendar Detail form, depending on whether or not each Attendee's Exchange email address matches the email address for a Siebel Employee record.

NOTE: Exchange Attendees must be specified on the Scheduling tab of the Outlook Calendar item. SSSE does not support entering attendees using the Contacts field on the Appointment tab of the Calendar item.

Employee participants can view the Calendar item in their Siebel Calendars. The Calendar appointment is created regardless of each participant's Accept/Decline status.

Provided that the Organizer is sync-enabled, the data that appears in the Siebel Calendar item is updated if the Organizer modifies the appointment in Exchange, and subsequent synchronizations propagate the modifications to the Attendees' copies of the appointment in Exchange. If Attendees other than the Organizer modify their copies of the appointment in Exchange, those modifications are not synchronized in the Siebel application.

If any Attendee modifies the Siebel Calendar item, subsequent synchronizations propagate the modifications to Attendees' copies of the appointment in Exchange.

Special Handling When the Exchange Organizer Is Not Mapped or Enabled to Use SSSE

If the Organizer who creates an Exchange Calendar appointment in Outlook is not enabled to use SSSE, and is not an employee recognized by the Siebel application, then SSSE uses the value of the Generic Siebel Owner setting as the Owner when synchronizing the appointment in the Siebel application. If, additionally, the administrator has not configured a value for the Generic Siebel Owner setting, then SSSE does not synchronize the Calendar appointment. For more information about the Generic Siebel Owner setting, see "Configuring the Generic Siebel Organizer" on page 71.

NOTE: If the Organizer who creates an Exchange Calendar appointment in Outlook is not enabled to use SSSE, then Siebel users cannot use their Siebel Calendars to update the Siebel Calendar item that is produced by synchronization of the appointment. Users must make any updates to the item in Exchange, and then SSSE must synchronize the changes with the Siebel application.

Special Handling When an Exchange Attendee Is Not Enabled to Use SSSE

As long as at least one Exchange participant is enabled to use SSSE, the Calendar item is synchronized in the Siebel Calendars of all valid Employee attendees, even if some of those attendees do not have synchronization enabled.

Similarly, valid Employee attendees are listed in the Employee field of the Calendar Detail form for the item.

A Contact who is an Attendee for an Exchange Calendar appointment is listed in the Contacts field of the Calendar Detail form for the synchronized item, provided that SSSE finds the Contact already listed in the Siebel database. An unknown Contact attendee is not listed in the Contacts field of the Calendar Detail form.

NOTE: If an Exchange Calendar appointment has any Attendees who are not enabled to use SSSE, whether those users are Siebel Users or Contacts, then the Siebel user interface treats the record as read-only. Users must make any updates to the item in Exchange, and then SSSE must synchronize the changes in the Siebel application.

Special Handling When an Exchange Attendee Deletes or Declines an Exchange Meeting

The results of deleting or declining an Exchange meeting depend on whether or not the attendee has SSSE synchronization enabled:

- If the attendee has synchronization enabled, declining or deleting an Exchange meeting causes SSSE to remove that attendee from the Siebel Calendar item.
- If the attendee does not have synchronization enabled, declining or deleting an Exchange meeting does not cause any change in the Siebel Calendar item’s list of attendees, regardless of whether the change in Exchange is made in the attendee’s folder or in the Organizer’s folder.

About Using SSSE with To Do Records

Siebel To Do Activities are called Tasks in Microsoft Outlook. The SSSE administrator sets To Do synchronization levels to either Full Sync, Export Only, or None. The synchronization level that the administrator sets applies to all users who have synchronization enabled. End users have no control over To Do synchronization. After SSSE initiates synchronization for a particular user, all To Do synchronization for that user is automatic; no user action is required.

The following topics assume that To Do synchronization is set to Full Sync.

Topics in This Section

Related Topics

"SSSE Synchronization Options" on page 15

Factors That Determine To Do Record Synchronization

Whether or not a To Do record is synchronized depends on the following factors:

- The synchronization level that the administrator sets (Full Sync, Export Only, or None).
- The value of the following configuration parameters, which the administrator also sets:
  - ExtractStartDate (in MM/DD/YYYY format)
  - ExtractStartDateFormat

  If a To Do item has a Due date that is earlier than the value of the ExtractStartDate parameter, that item is not synchronized.
- The value of the Display In field for each individual To Do record. (SSSE synchronizes To Do records for which the value of the Display In field is To Do and Activities.)

Creating, Modifying, or Deleting a To Do Record

You can add a new To Do activity, change an existing To Do activity, or remove a To Do activity in either the Siebel application or Outlook. Synchronization is automatic.

Creating or Modifying a Recurring To Do Record

The Siebel application does not support recurring To Do activities, but Outlook does. If you set an activity (task) recurrence in Outlook, when the task is synchronized, a single one-time To Do activity record is created in the Siebel application.

Adding an Attachment to a To Do Record

It is possible to add attachments to both Outlook Task items and Siebel To Do Activity items. However, when SSSE synchronizes these items, the attachments are not synchronized.

By default, the current version of SSSE preserves both Outlook and Siebel attachments during synchronization. That is, if an Outlook Task item has attachments, and the corresponding Siebel To Do record is updated, the next synchronization will update the Outlook Task without affecting the attachment. Similarly, if a Siebel To Do record has attachments, and the corresponding Outlook Task item is updated, the next synchronization will update the Siebel To Do record without affecting the attachment.

An administrator can configure SSSE to discard Outlook attachments when a noncalendar Outlook item is updated. For information about this configuration option, see "Configuring Exchange Connector Parameters" on page 79.

Assigning To Do Activities to Other Users

You can assign activities to other users in either the Siebel application or Outlook. During synchronization, SSSE makes the appropriate changes in the Siebel application or Microsoft Exchange Server.

In Outlook, you assign a task by clicking Assign Task and then filling in the To field. If you select the Keep an updated copy of this task on my task list check box, then the task appears on both your own and the assignee's task list.

In the Siebel application, you assign a task by changing the Owner to another person. If you change the owner of an activity in the Siebel application, the activity appears in your My Delegated Activities view and the assignee's My Activities view.

If you assign a task to more than one person in Outlook, when synchronized, SSSE creates multiple To Do activities in the Siebel application because Siebel applications do not support more than one owner for each task.

Assigning Priorities to a To Do Record

Table 37 indicates how a To Do activity's Priority is set when synchronized between the Siebel application and Microsoft Exchange Server.

Table 37. Priority Synchronization

Siebel Priority Value	Exchange Priority Value
1-ASAP	High
2-High	High
3-Medium	Normal
4-Low	Low

Assigning Status Values to a To Do Record

Table 38 indicates how a To Do activity's Status is set when synchronized between the Siebel application and the Microsoft Exchange Server.

Table 38. Status Synchronization

Siebel Status Value	Exchange Status Value
Acknowledged	0
Not Started	0
In Progress	1
Done	2

Table 38. Status Synchronization

Siebel Status Value	Exchange Status Value
On Hold	3
Cancelled	4
Declined	4

Setting a To Do Activity Alarm

Outlook lets you set a task Reminder that displays a reminder at a time that you set. Siebel applications let you set an Alarm flag that displays a reminder at the time the To Do activity is due.

If you set a task Reminder in Outlook, when synchronized, the Alarm flag is set on the To Do activity in the Siebel application. If the Alarm flag is set in the Siebel application, when synchronized, a Reminder is set on the task in Microsoft Exchange Server. The reminder is set to the time the activity is due.

About Using SSSE with Contacts Records

The SSSE administrator sets Contacts synchronization levels to either Full Sync, Export Only, or None. The SSSE administrator sets Personal Contacts and Business Contacts synchronization levels independently. Users can change Personal Contacts to Business Contacts in either the Siebel application or Microsoft Outlook, but users can only change Business Contacts to Personal Contacts in Outlook.

Contacts are synchronized only if the user uses the Add To Sync List command to request that the contact record be synchronized. The Add To Sync List command adds the current user to the Sync List MVG field for the selected record. For Business Contacts, if Visibility is set to Sales Rep, contact records to be synchronized must also be visible in the user’s My Contacts list.

For successful synchronization of Business Contacts that have either Account information or Business Address information, when you are synchronizing from Microsoft Exchange to a Siebel application, the contact information must include both an Account Name and an Account Location.

If a SSSE user has multiple positions in the Siebel application, contacts are synchronized to the user’s primary position.

If a new account is added to a Business Contact in Outlook, that account is made the primary Account for that Contact when the record is synchronized with the Siebel application. Any accounts previously associated with that Contact remain associated but are not primary.

If a new Business Address is added to a Business Contact in Outlook, that Business Address is made the primary Business Address for that Contact when the record is synchronized with the Siebel application. Any Business Addresses previously associated with that Contact remain associated but are not primary.

If a new Personal Address is added to a Business Contact in Outlook, that Personal Address is made the primary Personal Address for that Contact when the record is synchronized with the Siebel application. Any Personal Addresses previously associated with that Contact remain associated but are not primary.

The following tasks are applicable to both the My Contacts and My Personal Contacts views, and assume that Contacts synchronization is set to Full Sync.

NOTE: SSSE does not support the synchronization of Microsoft Outlook or Microsoft Exchange Server distribution lists. SSSE can synchronize only individual contacts.

Topics in This Section

"Designating Contact Records for Synchronization" on page 141

"Ending Synchronization of Contact Records" on page 142

"Creating, Modifying, or Deleting a Contact" on page 142

"Adding an Attachment to a Contact" on page 143

"Creating a Personal Contact" on page 143

"Account-to-Contact Relationships" on page 144

"Contact Access" on page 144

"Changing Contact Domains" on page 144

Related Topics

"SSSE Synchronization Options" on page 15

Designating Contact Records for Synchronization

Contacts (both personal and business) in the Siebel application are synchronized with Microsoft Exchange Server only if your user name appears in the Sync List MVG field for the individual Contact records. The following procedure describes how to designate a Contact record for synchronization in this way.

To designate a Contacts record for synchronization

1. From the Siebel application menu, choose Navigate > Site Map > Contacts > Contacts List or Personal Contacts List.
2. In the My Contacts or My Personal Contacts list, select one or more records.
3. In the My Contacts or My Personal Contacts list, click Menu, and then choose Add To Sync List.

Related Topic

"Designating Employee Records for Synchronization" on page 146

Ending Synchronization of Contact Records

The following procedure describes how to stop synchronizing one or more Contact records that you have previously synchronized.

To stop synchronizing selected Contacts records

1. From the Siebel application menu, choose Navigate > Site Map > Contacts > Contacts List or Personal Contacts List.
2. In the My Contacts or My Personal Contacts list, select a Contact record that you no longer want to synchronize with Exchange.
3. Click Menu, and then choose Remove from Sync List.

   NOTE: When you choose Remove from Sync List, you remove yourself from the Sync List for the selected Contact record. On your next synchronization, SSSE removes the corresponding Contact record from your Exchange mailbox.

Related Topic

"Ending Synchronization of Employee Records" on page 146

Creating, Modifying, or Deleting a Contact

You can add a new contact, modify an existing contact, or delete a contact in either the Siebel application or Outlook.

If you add a new contact in the Siebel application, you must also add yourself to the contact record's Sync List in order for the contact record to be synchronized in Microsoft Exchange. For information about adding a yourself to a contact record's Sync List, see "Designating Contact Records for Synchronization" on page 141.

If you add a new contact in Microsoft Outlook, you must place an appropriate value in the Category field in order for the contact record to be synchronized in the Siebel application. One value in the Category field for the contact in Outlook must match the value defined in the PIM Category Value field for the contact domain. (You can specify more than one value for the Category, as long as you include the required value.) The default for the required value is Siebel Contact.

After the initial synchronization of a contact record, subsequent synchronizations are automatic.

NOTE: Employee contacts in Outlook are a special case. See "Synchronizing Employees" on page 145.

If you delete a business contact in Outlook, synchronization removes you from the Sync List for the corresponding Siebel contact record, but the contact record itself continues to exist in the Siebel database.

If you delete a personal contact in Outlook, synchronization deletes the corresponding Siebel personal contact record from the Siebel database.

If any Siebel user is removed from the Sync List of a business contact record or personal contact record in the Siebel application, synchronization deletes that user’s corresponding contact record in Outlook.

If multiple sync-enabled Siebel users are added to the Sync List of a contact record in the Siebel application, then SSSE synchronizes the contact record with the Exchange mailboxes of all the users who are on the Sync List.

If the Allow MVG Creation check box is not selected for a particular user in the User Level Access Control list, and if the administrator has set default values for the Account, Personal Address, and Business Address fields in the Siebel Domains, then if a new address or account is added to one of the user's contact records in Outlook, SSSE uses the administrator-supplied default value when the record is synchronized with the Siebel application.

Adding an Attachment to a Contact

You can add attachments to Contacts in both Outlook and the Siebel application. However, when the Contact is synchronized, attachments are not synchronized.

By default, the current version of SSSE preserves both Outlook and Siebel attachments during synchronization. That is, if an Outlook Contact record has attachments, and the corresponding Siebel record is updated, the next synchronization will update the Outlook Contact without affecting the attachment. Similarly, if a Siebel Contact record has attachments, and the corresponding Outlook item is updated, the next synchronization will update the Siebel record without affecting the attachment.

An administrator can configure SSSE to discard Outlook attachments when a noncalendar Outlook item is updated. For information about this configuration option, see “Configuring Exchange Connector Parameters” on page 79.

Creating a Personal Contact

In Outlook, the Private check box determines if a contact is a personal contact. If the Private check box is selected, then the contact is considered a personal contact and appears in the My Personal Contacts view in the Siebel application. If the Private check box is not selected, the contact is considered a business contact and appears in the My Contacts view in the Siebel application.

To create a personal contact in Outlook

1. In Outlook, open or create a Contact record.
2. Select the Private check box.
3. In the Category field, enter the value that matches the PIM Category Value setting for the Siebel Personal Contacts domain.

   You can specify more than one Category, as long as you include the required value.

Account-to-Contact Relationships

In Siebel applications, a contact can have multiple associated accounts, but in Outlook this is not the case. When synchronizing contact information, only the primary account in the Siebel application is exported or synchronized with Microsoft Exchange Server.

If a new account is added to a Business Contact in Outlook, that account is made the primary Account for that Contact when it is synchronized in the Siebel application. Any accounts previously associated with that Contact remain associated but are not primary.

CAUTION: Users must not delete the association between an Account and a Contact in Outlook. Users must delete the association in the Siebel application. The limitation is due to the fact that when you delete the association in Outlook, the delete operation causes the next Account in line to become the Primary Account for the Contact.

Consider a case where a Contact C1 is associated with 10 Accounts A1...A10 with A1 being the primary. When this contact is synchronized in Exchange, the Account A1 becomes the value for the Company field. If the user clears the Company field in Outlook, then SSSE deletes A1 from the Account MVG for the Contact. In the process, A2 (next Account record) becomes primary and this change is synchronized in Exchange. The end-result is that the user who cleared A1 now sees A2 in its place. This has the potential for confusion and data loss.

Contact Access

For a Business Contact in the Siebel application to be accessible to SSSE, the user who is synchronizing must be on the Contact record’s Sync List.

Changing Contact Domains

You can change a Personal Contact to a Business Contact in either the Siebel application or Microsoft Outlook, by clearing the Private check box for the record. After you make this change, the record disappears from your Siebel Personal Contacts List and appears in your Siebel Contacts List. (A Personal Contacts record is deleted and a Business Contacts record is created.) If you make the change in the Siebel application, synchronization automatically clears the Private check box in Outlook.

However, you can only change a Business Contact to a Personal Contact in Outlook, by selecting the Private check box. After you make this change, the next synchronization removes you from the Sync List for the corresponding record in the Siebel Contacts List, and a new record appears in your Siebel Personal Contacts List.

NOTE: It is not possible to select a Private checkbox for a Business Contact record in the Siebel application.

About Using SSSE with Employee Records

Employees in the Siebel application are Contacts in Microsoft Outlook. SSSE distinguishes employees from other contacts in Microsoft Exchange Server by the use of an appropriate Category value. The default Category value for indicating an employee is Employee.

The SSSE administrator sets Employee synchronization levels to either Export Only or None. Employee records are synchronized only if the user designates them for synchronization by using the Add To Sync List command. The Add To Sync List command adds the current user to the Sync List MVG field for the selected record.

NOTE: SSSE does not support the synchronization of Microsoft Outlook or Microsoft Exchange Server distribution lists. SSSE can synchronize only individual contacts and employees.

Topics in This Section

Related Topics

"SSSE Synchronization Options" on page 15

Synchronizing Employees

Bidirectional synchronization is not recommended for the Employee domain, because its use could allow end users to create unauthorized Employee records in Microsoft Outlook, and those records would be synchronized in the Siebel database for the enterprise, causing data corruption. It is strongly recommended that administrators leave the synchronization level for Employees set to the default value of Export Only.

If Employee synchronization is set to Export Only, an employee's data is exported from the Siebel Application to Microsoft Exchange at the time that you designate the Employee record for synchronization. For information about how to do this, see "Designating Employee Records for Synchronization" on page 146. As long as the employee remains on your Sync List, SSSE automatically exports employee record changes from the Siebel application to Microsoft Exchange.

Related Topics

"Setting Siebel Domain-Level Synchronization" on page 111

Designating Employee Records for Synchronization

Employee records in the Siebel application are exported to you Microsoft Exchange mailbox only if your user name appears in the Sync List MVG field for the individual Employee records. The following procedure describes how to designate an Employee record for synchronization in this way.

To designate an Employee record for synchronization

1. From the Siebel application menu, choose Navigate > Site Map > Employees.
2. In the Employees list, select a record.
3. In the Employees list, click Menu, and then choose Add To Sync List.

Ending Synchronization of Employee Records

The following procedure describes how to stop synchronizing one or more Employee records that you have previously synchronized.

To stop synchronizing selected Employee records

1. From the Siebel application menu, choose Navigate > Site Map > Employees > Employees List.
2. In the All Employees list, select a record for an employee that you have previously synchronized but no longer want to synchronize.
3. In the All Employees list, click Menu, and then choose Remove from Sync List.

   NOTE: When you choose Remove from Sync List for an Employee record, or when you clear the Sync field check box (which has the same effect), you remove yourself from the Sync List for the selected Employee record. On your next synchronization, SSSE removes the corresponding Contact record from your Exchange mailbox.

Related Topics

"Synchronizing Employees" on page 145

Creating or Modifying an Employee

Because it is recommended that the synchronization level for employees be Export Only, you must add or modify employees in the Siebel application. Do not add or modify employees in Outlook. After adding an employee in the Siebel application, be sure to designate the record for synchronization, as described in "Designating Employee Records for Synchronization" on page 146.

Deleting an Employee

Because it is recommended that the synchronization level for employees be Export Only, you must delete employees in the Siebel application. Do not delete an employee in Outlook. If you delete an employee in Outlook, the employee record reappears in Outlook the next time Employee records are exported from the Siebel application.

If Employee synchronization is set to Export Only, after an employee is deleted in the Siebel application, the deleted record is automatically removed from Microsoft Exchange Server.

About Minor Error Messages

When SSSE synchronizes a particular user's data, the synchronization can succeed completely, succeed partially, or fail completely. This topic lists some error messages that indicate partially successful synchronization. These error messages generally indicate a problem with an individual record—other records for the same user may synchronize successfully. For this type of error, SSSE typically displays the error message for only one synchronization attempt. On the next synchronization attempt, the error message does not repeat. Table 39 contains a listing of some error messages of this type.

NOTE: If a row in Table 39 indicates that SSSE does not save the user's sync state for the session, this means that SSSE does not synchronize the record that has the error, but continues synchronizing the user's other records. At the end of the synchronization process for the current user, SSSE does not record a completely successful inbound (Outlook to Siebel) synchronization session. For each synchronization session, SSSE attempts to synchronize all user-visible records in the domain that have changed since the last completely successful synchronization of that domain. Therefore, many records may be resynchronized even if only one record failed during the previous synchronization attempt.

Table 39. Relatively Benign Error Messages

Logged Message	Error Code	Cause and Result of Error
Failed to process the unresolved attendees for Siebel Row: *row_ID*, Siebel Domain: *domain_name*.	none	Saving the unresolvable attendees for this appointment fails. SSSE does not synchronize the record that had the error, but continues synchronizing the user's other records. SSSE does not save the user's sync state for the session. SSSE also saves the attendee data in a special table, so that if the Siebel record changes and is synchronized to Exchange, the Exchange record retains the unresolved attendees.
One or more records with the same key already exists.	IDS_ERR_EAI_SA_MULTIPLE_MATCH IDS_ERR_EAI_SA_DUP_CONFLICT SSASqlErrDupConflict2 SSASqlErrDupConflict	SSSE found a duplicate record in the Siebel database. SSSE does not synchronize the record that had the error, but continues synchronizing the user's other records. SSSE does not save the user's sync state for the session.

Table 39. Relatively Benign Error Messages

Logged Message	Error Code	Cause and Result of Error
One or more required fields of this record are empty.	IDS_ERR_EAI_SA_MISSING_REQ_FIELD IDS_WRN_EAI_SA_DML SSASqlErrReqField	One of the required fields for this record is empty and there was no default configured. SSSE does not synchronize the record that had the error, but continues synchronizing the user’s other records. SSSE does not save the user’s sync state for the session.
This record cannot be deleted because it does not exist.	IDS_ERR_EAI_SA_BC_NO_DATA SSASqlErrRecordDeleted	SSSE cannot delete a record because it is not in Siebel (it was probably already deleted).
Value entered for one or more fields of this record is not compatible with their declared Data Type.	SSASqlErrValidation	The value for one of the fields in this record is not of the correct data type for the field. SSSE does not synchronize the record that had the error, but continues synchronizing the user’s other records. SSSE does not save the user’s sync state for the session.
Number of characters entered for one or more fields of this record exceeds their declared Data Length.	SSAOMErrDataTooLong SSASqlErrBindVarOverflow1	A text field for this record has more characters than the corresponding Siebel field can handle. SSSE does not synchronize the record that had the error, but continues synchronizing the user’s other records. SSSE does not save the user’s sync state for the session.

Table 39. Relatively Benign Error Messages

Logged Message	Error Code	Cause and Result of Error
One or more fields of this record has characters that are not compatible with this DB Code Page.	SSASqlErrUnicodeToCodePage SSASqlErrUnicodeConversion	At least one of the fields in this record is not compatible with the codepage data base. This condition typically affects multiple users. SSSE does not synchronize the record that had the error, but continues attempting to synchronize the user's other records. SSSE does not save the user's sync state for the session. You may be able to correct this condition by inspecting the indicated record and changing any special characters to standard characters.
Alarm flag is checked for past appointment.	SSAOMErrAlarmTriggerTimePassed	This appointment being synchronized is scheduled in the past and has an alarm flag checked in the PIM record. SSSE synchronizes the record but does not synchronize the outdated alarm flag. No user or administrator action is needed.
One or more picklist fields of this record have a value that is not part of the bounded picklist of values.	SSAOMErrBoundedPick IDS_ERR_EAI_SA_PICK_VALIDATE	A value that SSSE is trying to use for a picklist field is not available in the picklist for the field. SSSE does not synchronize the record that had the error, but continues synchronizing the user's other records. SSSE does not save the user's sync state for the session.

9 Setting Up and Using Siebel Outlook Add-In

This chapter describes how to set up and use the Siebel Outlook Add-In deployment option for SSSE. The chapter includes the following topics:

About Siebel Outlook Add-In

The Siebel Outlook Add-In lets users link from Microsoft Outlook Calendar appointments, Contacts, and Tasks to Siebel records using controls in the Outlook interface.

The Siebel Outlook Add-In adds the following controls to the Calendar, Contacts, and Tasks views of the user's Outlook interface:

- Siebel Options menu
- Siebel toolbar
- Right-click menu items
- Siebel tab in Options dialog box

Using these controls a user can link Siebel records to Outlook calendar, contacts, or tasks records. For example, a user creates a calendar appointment in Microsoft Outlook and then links that appointment to a relevant Opportunity in the Siebel application. After a user links a Siebel record to an Outlook record, the user can use the link to navigate from Outlook directly to the linked record in the Siebel application.

Siebel Outlook Add-In uses the same permissions as PIMSI Engine for allowing specific users to synchronize calendar, contact, and task data. For more information about setting permissions, see "Setting SSSE Group and User Access Controls" on page 118.

Siebel Outlook Add-In Controls

The following figures illustrate the new controls provided by the Siebel Outlook Add-In that allow linking to Siebel data from Outlook.

Figure 3 shows the Siebel Options menu. This menu lets you link the selected Outlook item to a record in the Siebel application, remove existing links, or access recently created links.

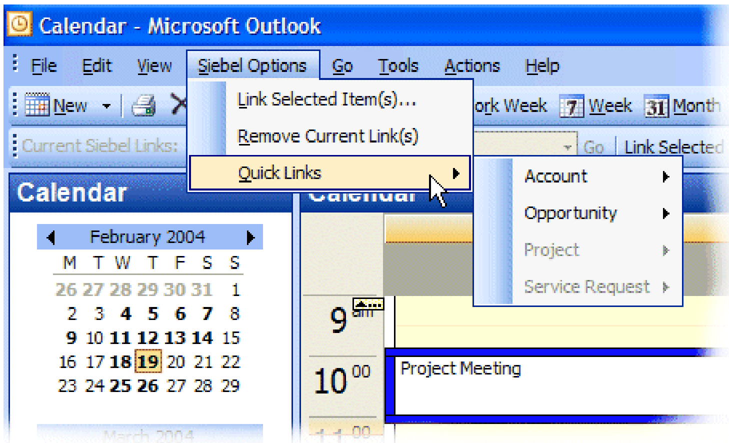

Figure 3. Siebel Options Menu

Figure 4 shows the Siebel toolbar, which lets you link the selected Outlook item to a record in the Siebel application or use an existing link to go to a record in the Siebel application.

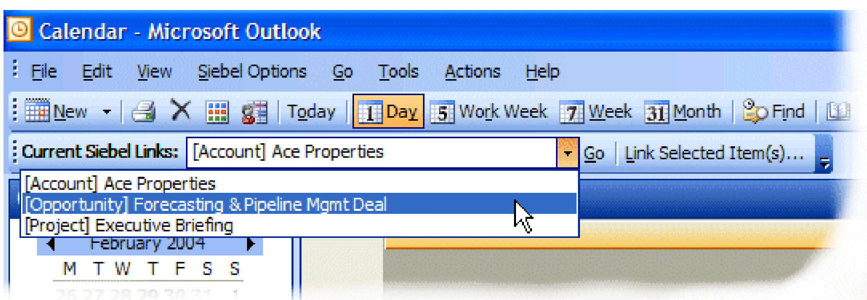

Figure 4. Siebel Toolbar

Figure 5 shows the right-click menu, which lets you link the selected Outlook item to a record in the Siebel application or remove existing links.

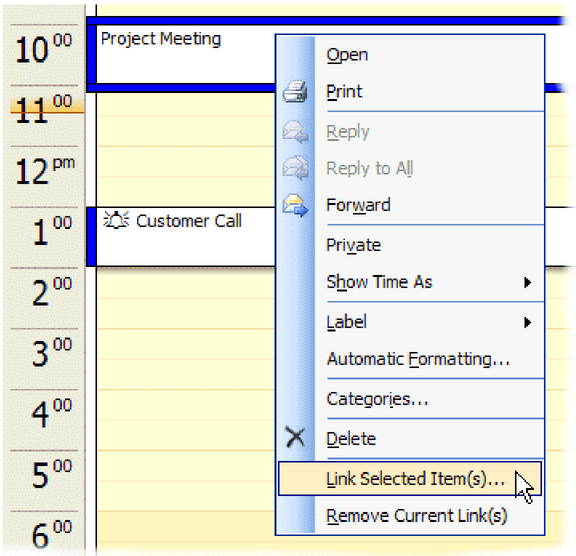

Figure 5. Right-Click Menu Items

Figure 6 shows the Siebel tab in the Options dialog box, which lets you set up communication settings in your Siebel application.

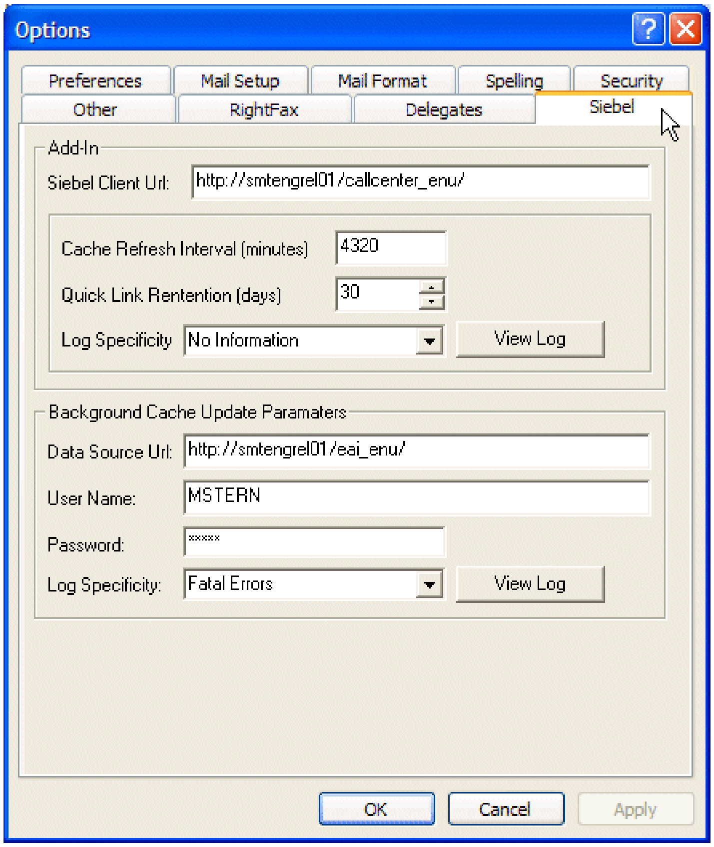

Figure 6. Siebel Tab in Options Dialog Box

Related Topics

"Using Siebel Outlook Add-In" on page 160

System Requirements for Siebel Outlook Add-In

Deployment of Siebel Outlook Add-In requires the following:

- You must install PIMSI Engine before you deploy Siebel Outlook Add-In. For information about PIMSI Engine, see "SSSE Deployment Options" on page 14.
- You must install a supported version of Microsoft Outlook on the machine of each user who needs Siebel Outlook Add-In. For information about supported versions, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.

Process of Setting Up Siebel Outlook Add-In

Setting up Siebel Outlook Add-In consists of the following tasks, which you must complete in the order shown. The system administrator performs the first task on the Siebel Enterprise Server. The second task is required only if your implementation modifies the information that Outlook Add-In makes available. An administrator can perform it wherever there is access to your Siebel application and Enterprise database. Either the administrator or the end user performs the remaining tasks on the end user's machine.

To deploy the Siebel Outlook Add-In, complete the following tasks:

1. "Setting Enterprise Server Parameters" on page 155
2. "(Optional) Setting Siebel Outlook Add-In Objects and Fields" on page 156
3. "Installing Siebel Outlook Add-In" on page 157
4. "Clearing Browser Objects" on page 158
5. "Initializing Siebel Outlook Add-In" on page 158
6. "Testing Siebel Outlook Add-In" on page 159

Setting Enterprise Server Parameters

You must set the MsgClientAddInEAIUrl enterprise server parameter, which defines the path to the Siebel EAI. The Add-In Update Agent uses this path to download data from the Siebel application and cache the data on the client's desktop. For information about the Add-In Update Agent, see "Installing Siebel Outlook Add-In" on page 157.

You must also enable Web Client Automation.

If you want, you can also set values for the MsgClientAddInCacheRefreshInterval parameter and the MsgClientAddInLinkHistory parameter. The MsgClientAddInCacheRefreshInterval parameter defines the initial cache refresh interval for all users, in minutes. The MsgClientAddInLinkHistory parameter defines the initial quick link retention period for all users, in days. For information about how individual users can modify these values in Outlook, see "Setting the Cache Refresh Interval" on page 160 and "Setting the Quick Link Retention Period" on page 160.

CAUTION: You must use the same authentication mechanism for the Application Object Manager and the EAI Object Manager used to refresh the data cache. This is because SSSE uses the user name and password of the currently logged in user to log in to the EAI Object Manager to refresh the data cache. If the authentication mechanism for the Object Manager is different from the authentication mechanism for the Application, this results in a refresh failure.

This task is a step in "Process of Setting Up Siebel Outlook Add-In."

To set the MsgClientAddInEAIUrl enterprise server parameter

1. Log in to the Siebel Enterprise Host as the administrator.

2. From the Siebel application menu, choose Navigate > Site Map > Administration - Server Configuration > Enterprises.
3. In the Enterprise Servers list, click the appropriate enterprise server, and then click the Parameters view tab.
4. In the Enterprise Parameters list and the accompanying form, select each of the parameters shown in the following table, and enter or modify values and check box settings as needed.

Parameter	Value	Effective
Messaging Client AddIn EAI Url	Enter the Siebel EAI path http://*<your_host>/<eai_ language-code>/*	At Server Restart
Messaging Client AddIn Cache Refresh Interval	Optional. Modify the value of the cache refresh interval in minutes.	At Server Restart
Messaging Client AddIn Link History	Optional. Modify the number of days to keep quick links.	At Server Restart

5. On the Siebel Server where the Siebel application is enabled, complete the following substeps to modify the configuration file for the application:
   a. Navigate to the directory *Siebel_installation_home*\siebsrvr\BIN*language-code*.
   b. Locate the .cfg file for the application, and open it using a text editor.

      For example, edit the uagent.cfg file for the Siebel Call Center application, or edit the siebel.cfg file for the Siebel Sales application.
   c. Set the EnableWebClientAutomation setting to TRUE.
   d. Save the file.
   e. Restart the Siebel Server.
6. Proceed to "Installing Siebel Outlook Add-In."

(Optional) Setting Siebel Outlook Add-In Objects and Fields

This topic describes the information that Outlook Add-In ordinarily makes available. If your Siebel implementation does not require all of that information, you can use the instructions in this chapter to have Outlook Add-In omit the information that your users do not need. You can also adjust the order in which Outlook Add-In supplies information from the relevant Siebel fields.

This task is an optional step in "Process of Setting Up Siebel Outlook Add-In."

Table 40 lists the Siebel objects and fields that Siebel Outlook Add-In makes available from Outlook. Outlook Add-In lets you link to Siebel records that have any of the listed Siebel Object types. The data that is contained in the listed Siebel Object Fields is the data that is visible in Siebel Outlook Add-In controls.

Table 40. Siebel Objects and Fields Available Through Outlook Add-In

Siebel Object	Siebel Object Fields
Account	Id, Name, Location
Opportunity	Id, Name, Account
Project	Id, Name, Account Name, Project Num
Service Request	ID, SR Number, Abstract, Account

The following procedure describes how to set the Siebel Objects, Siebel Object fields, and field order that Outlook Add-In uses when supplying Siebel data.

To set Siebel Objects and Siebel Object Fields that Outlook Add-In makes available

1. Log in to your Siebel application as the administrator.
2. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Siebel Objects.
3. In the PIMCI Siebel Object list, select any object that you do not want Outlook Add-In to make available, and then click Delete.

   Repeat this step until the list displays just the objects that you want Outlook Add-In to make available.
4. In the PIMCI Siebel Object list, select any object for which you want to adjust field settings.
5. In the Siebel Object Fields list, select the record for any field that you do not want Outlook Add-In to display in its controls, and then click Delete.

   Repeat this step until the list displays just the fields that you want Outlook Add-In to display in its controls.
6. In the Siebel Object Fields list, inspect the Field Sequence values for the remaining fields, and enter new values as needed to produce the desired sequence.

   NOTE: Field sequence values must be unique. To avoid error messages, enter only values that are not currently assigned to other fields.

Installing Siebel Outlook Add-In

You must install the Siebel Outlook Add-In on each user's machine where it will be used.

The following procedure installs the Siebel Outlook Add-In dynamic link library (DLL) files and the Add-In Update Agent. The Add-In Update Agent is automatically started when you try to create Outlook-to-Siebel links or when you restart your computer. The Add-In Update Agent is responsible for caching and refreshing Siebel data stored on the user's machine.

This task is a step in "Process of Setting Up Siebel Outlook Add-In."

To install Siebel Outlook Add-In

1 On the user's machine, close all Outlook windows and all Siebel application windows.

2 Navigate to the network directory that contains the installation files for your Siebel application and start the install program `...\Siebel_Outlook_Addin\install.exe`.

3 Follow the installation wizard prompts. Accept all default values. You can install to any location on the user's hard drive.

4 Proceed to "Clearing Browser Objects."

Clearing Browser Objects

If the user has previously used their browser to access Siebel applications, you must remove the existing browser objects.

This task is a step in "Process of Setting Up Siebel Outlook Add-In."

To clear browser objects

1 Exit all applications, and then open a new browser window.

2 From the Tools menu, choose Internet Options.

3 On the General tab, under Temporary Internet Files, click Settings.

4 In the Settings dialog box, click View Objects.

5 In the Downloaded Program Files, delete all files.

   If you receive an error while deleting a file, repeat Step 1 through Step 5.

6 Close the Downloaded Program Files window.

7 Click OK to exit the Settings dialog box.

8 Click OK to exit the Internet Options dialog box.

9 Proceed to "Initializing Siebel Outlook Add-In."

Initializing Siebel Outlook Add-In

Perform the following task to initialize the communication between Outlook and the Siebel application.

This task is a step in "Process of Setting Up Siebel Outlook Add-In."

To initialize Siebel Outlook Add-In

1. On the user's machine, start Microsoft Outlook.
2. In Microsoft Outlook, select any calendar, contact, or task record (or create a new record if one does not exist), and then choose Siebel Options > Link Selected Item(s).
3. When you are prompted to start the Siebel application, open a browser window, navigate to the URL for your Siebel application, and then log in.

   Outlook connects to the Siebel server using the Siebel application and creates an initial cache file on the client machine. This can take several minutes. The Siebel Add-In Update Agent is started and appears in the system tray of your Windows desktop.
4. Wait five minutes to allow time for the creation of the local cache file and then proceed to "Testing Siebel Outlook Add-In."

Testing Siebel Outlook Add-In

Perform the following task to test linking and unlinking between Outlook and the Siebel application.

This task is a step in "Process of Setting Up Siebel Outlook Add-In."

1. In Microsoft Outlook, select any calendar, contact, or task record (or create a new record if one does not exist), and then choose Siebel Options > Link Selected Item(s).
2. Select any record in the Siebel application.

   If the link is successfully created, the link appears in the Existing Links list on the Siebel toolbar.
3. From the Siebel Options menu, choose Unlink Record to remove the link you just created.

   If you encounter no errors during linking and unlinking, then the communication between Outlook and the Siebel application has been initialized and is working properly.

Related Topics

"Linking to Siebel Data from Outlook" on page 161

Setting Siebel Outlook Add-In Options

Siebel Outlook Add-In adds a Siebel tab to the Microsoft Outlook Options dialog box, which lets you change settings that control how Outlook communicates with the Siebel application.

Topics in This Section

"Setting the Cache Refresh Interval" on page 160

"Setting the Quick Link Retention Period" on page 160

Setting the Cache Refresh Interval

The Siebel Outlook Add-In stores the linked Siebel data in a local cache file, which is updated periodically by obtaining new data from the Siebel application. By default, the cache is refreshed every three days (4320 minutes). You can change the cache refresh interval by performing the following task.

To change the Siebel Outlook Add-In cache refresh interval

1. In Microsoft Outlook on the user's machine, choose Tools > Options.
2. In the Options dialog box, click the Siebel tab.
3. In the Cache Refresh Interval text box, enter the new interval (in minutes).
4. Click OK to exit the Options dialog box.

Setting the Quick Link Retention Period

Quick Links are retained for a number of days as defined on the Siebel tab of the Microsoft Outlook Options dialog box. By default, Quick Links are retained for 30 days. You can change the Quick Link retention period by performing the following task.

To change the Quick Link retention period

1. In Microsoft Outlook on the user's machine, choose Tools > Options.
2. In the Options dialog box, click the Siebel tab.
3. In the Quick Link Retention text box, enter the new interval (in days).
4. Click OK to exit the Options dialog box.

Related Topics

"Using Outlook Add-In Quick Links" on page 162

Using Siebel Outlook Add-In

The Siebel Outlook Add-In adds a Siebel Options menu, a Siebel toolbar, and right-click menu items to the Microsoft Outlook interface. These features let you link to records in the Siebel application. You can also remove links using these controls.

Table 41 lists the types of Siebel records that you can link to from Outlook.

Table 41. Supported Outlook-to-Siebel Record Linking

Outlook Record Type	Can Link to These Siebel Record Types
Calendar	Account
	Opportunity
	Project
	Service Request
Task	Account
	Opportunity
	Project
	Service Request
Contact	Account
	Opportunity
	Project

Each Outlook record can support a single link to each Siebel record type. For example, an Outlook contact can link to one Siebel account, one Siebel opportunity, and one Siebel project. If you link to a new Siebel record and a link of that type already exists, the new link replaces the old link.

You can associate the same Siebel record to multiple Outlook records. By selecting multiple Outlook records, and then associating the Siebel records, you can assign the same Siebel record to multiple Outlook records in a single operation.

Topics in This Section

Linking to Siebel Data from Outlook

Perform the following task to link from Outlook records to Siebel records.

To link to Siebel data from Outlook

1 In Microsoft Outlook, select one or more calendar appointments, tasks, or contacts.

2 From the Siebel Options menu, choose Link Selected Item(s).

NOTE: You can also create links using the Siebel toolbar and the right-click menu.

3 In the Create Siebel Links dialog box, from the Link Type drop-down list, choose a Siebel record type.

4 Select a record from the list, and then click Add.

5 When you have defined all of the links, click OK.

The links appear in Current Siebel Links on the Siebel toolbar and also on the Siebel Options > Quick Links list.

Using Outlook Add-In Quick Links

When you link to Siebel data from Outlook, the link is automatically added to the Siebel Options > Quick Link list. You can use the Quick Link list to link one of the listed Siebel records to another Outlook record, or records. By default, the Quick Link list retains links for 30 days. To change the Quick Link retention period, see "Setting the Quick Link Retention Period" on page 160.

To use a Quick Link

1 In Microsoft Outlook, select one or more calendar appointments, tasks, or contacts.

2 From the Siebel Options menu, choose Quick Links, and then choose the desired link.

The selected record is linked to the current Outlook record, or records.

Using Outlook Add-In Links

When you link to Siebel data from Outlook, the link is automatically added to the Current Siebel Links drop-down list on the Siebel toolbar. This list displays the Siebel links associated with the currently selected Outlook record. Selecting a link from the list lets you access the Siebel record from Outlook.

To use a link

1 In Microsoft Outlook, select one or more calendar appointments, tasks, or contacts.

2 On the Siebel toolbar, choose a link from the Current Siebel Links drop-down list, and then click Go.

The associated record is displayed in the Siebel application.

Removing Links to Siebel Data

You can remove individual links or all links associated with an Outlook record.

To remove individual links associated with an Outlook record

1. In Microsoft Outlook, select a calendar appointment, task, or contact.
2. From the Siebel Options menu, choose Link Selected Item(s).
3. In the Create Siebel Links dialog box, under Siebel Links, select a link, and then click Remove.
4. When you have removed the appropriate links, click OK.

To remove all links associated with an Outlook record

1. In Microsoft Outlook, select one or more calendar appointments, tasks, or contacts.
2. From the Siebel Options menu, choose Remove Current Link(s).

   NOTE: You can also remove links using the right-click menu.

3. Click Yes in the confirmation dialog box.

   All links associated with the selected Outlook records are removed.

About Using Outlook Add-In with the Mobile Web Client

If your computer is set up to use the Siebel Mobile Web Client with a local database and file system, and to use Microsoft Outlook in offline mode, you can use Outlook Add-In even when your computer is not connected to a network. The following capabilities are available in this situation:

- If the Siebel Mobile Web Client is running, you can use Siebel links to navigate from Outlook to a Siebel record in the local database.
- You can create or modify Siebel links in Outlook, whether Outlook is running in offline mode or connected to the Exchange Server, provided that the Siebel records involved are already present in the desktop cache. This cache is refreshed only when the computer is connected to the Enterprise or Regional Siebel Database. For this reason, records that are created in the local Siebel database are not present in the desktop cache until after the local database has been synchronized with the Enterprise or Regional database, and the desktop cache has been refreshed. A background process checks once a minute to determine whether the computer is connected to the Enterprise or Regional Siebel Database and whether the refresh interval has passed. If both these conditions are met, the cache is updated automatically. For information about setting the cache refresh interval, see "Setting the Cache Refresh Interval" on page 160.
- If you create items such as Siebel links in Outlook while working offline, those items are cached in an .OST file. The next time you synchronize your offline Outlook folders with your Exchange Server folders, either automatically or manually, Outlook copies your cached items to the Exchange Server.
- If you create an association by means of a Siebel link in Outlook (for example, if you link an Outlook Contact to a particular Siebel Account in your local database), the association is not visible in the Siebel Mobile Web Client until both of the following events have taken place:
  - The local Siebel database is synchronized with the Enterprise or Regional database

- The data in Outlook reaches the Exchange Server and is synchronized with the Siebel database by SSSE.

For an example of a Siebel Account being associated with an Outlook Contact, after these two synchronizations have taken place, the Account name appears in the Contact record regardless of whether you are using the local database or the Enterprise or Regional database.

10 Setting Up and Using Embedded Outlook Calendar

This chapter describes how to set up and use the Embedded Outlook Calendar deployment option for SSSE. The chapter includes the following topics:

About Embedded Outlook Calendar

Embedded Outlook Calendar (EOC) lets users access their Microsoft Outlook calendar from within the Siebel application.

The EOC interfaces with the Microsoft Exchange Server, and is a fully functional Outlook client that offers the same functionality as Microsoft Outlook. When appointments are created using the EOC, they are placed directly into the Microsoft Exchange Server and not the Siebel database. SSSE synchronizes these appointments into the Siebel database using PIMSI Engine. After this occurs, users can access the records originally created in the EOC in any Siebel Activity view.

The SSSE administrator can choose to give users access to only the EOC or both the EOC and the Siebel calendar. For more information about accessing the Siebel Calendar and the Embedded Outlook Calendar, see "About Siebel Calendars and Views" on page 166.

Figure 7 illustrates the Outlook calendar displayed in the Siebel Calendar view.

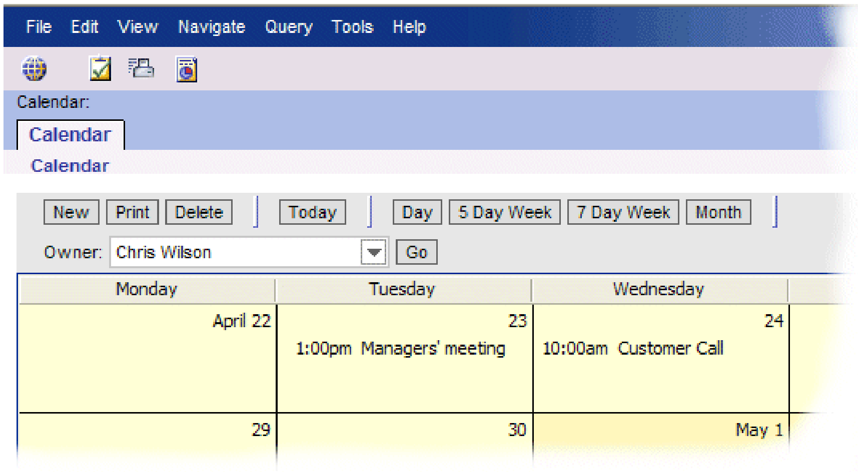

Figure 7. Outlook Calendar in the Siebel Calendar View

About Siebel Calendars and Views

Depending on your Siebel implementation, you may have access to one or more types of calendars. Table 42 lists the available Siebel calendars and views. For the Embedded Outlook Calendar, the Outlook View Control is embedded in the Siebel application to allow viewing of the Outlook calendar from within the Siebel application. This calendar is represented by a single view called HI Activity Outlook Calendar View. This view works only in High Interactivity (HI) mode.

Calendar Visibility

The regular Siebel view visibility controls the visibility of the three calendar types (SI Calendar, HI Calendar, and Embedded Outlook Calendar). If a user has a responsibility that permits visibility of all three views, then three Calendar links appear on the user's Calendar tab. Each link corresponds to one of the calendar types.

Table 42 illustrates the calendar views associated with responsibilities.

Table 42. Calendars and Views

Calendar	View Name	Description	Responsibility
Standard Interactivity (SI) Calendar	eCalendar Daily View	Daily calendar	SI Calendar (and many others)
	eCalendar Weekly View	Weekly calendar	
	eCalendar Monthly View	Monthly calendar	

Table 42. Calendars and Views

Calendar	View Name	Description	Responsibility
High Interactivity (HI) Calendar (aka JavaScript Calendar)	HI Activity Calendar View	Daily, Weekly, and Monthly calendars in a single view	Many responsibilities
Embedded Outlook Calendar	HI Activity Outlook Calendar View	Outlook calendar	Embedded Outlook Calendar

Related Topics

"Enabling Embedded Outlook Calendar Visibility" on page 168

System Requirements for Embedded Outlook Calendar

Deployment of Embedded Outlook Calendar requires the prior installation of PIMSI Engine. For more information about PIMSI Engine, see "SSSE Deployment Options" on page 14.

You must install a supported version of Microsoft Outlook on the machine of each user who needs Embedded Outlook Calendar. For information about supported versions, see *Siebel System Requirements and Supported Platforms* on Siebel SupportWeb.

Process of Setting Up Embedded Outlook Calendar

To deploy the Embedded Outlook Calendar, complete the following tasks in the order shown:

1. "Verifying the Outlook Day/Week/Month View Names" on page 167
2. "Enabling Embedded Outlook Calendar Visibility" on page 168

Verifying the Outlook Day/Week/Month View Names

To display the Embedded Outlook Calendar, you must specify the Outlook Day/Week/Month view names for the language that your Siebel implementation uses. This task is a step in "Process of Setting Up Embedded Outlook Calendar" on page 167.

To verify Day/Week/Month view names

1. From the Siebel application menu, choose Navigate > Site Map > Administration - PIM Server Integration > Configuration.
2. In the PIM Server Integration Configuration list, select Siebel Outlook Calendar.

3 In the Configuration Parameters list, verify that the following records exist. The example shown is for English-American language.

Section	Parameter	Value
Day/Week/Month_ENU	Day/Week/Month	Day/Week/Month
Day/Week/Month_ENU	Day/Week/Month View With AutoPreview	Day/Week/Month View With AutoPreview

4 If these records do not exist, then the Siebel administrator must create them as follows.

Section	Parameter	Value
Day/Week/Month_ <*language code*> (See the following note.)	Day/Week/Month	Enter a language-dependent Outlook view name for Day/Week/Month. See the second note following.
Day/Week/Month_ <*language code*> (See the following note.)	Day/Week/Month View With AutoPreview	Enter a language-dependent Outlook view name for Day/Week/Month View With AutoPreview. See the second note, following.

NOTE: <*language code*> is a three-letter Siebel language code in uppercase letters. For example, the English-American language code is ENU.

NOTE: To retrieve the Outlook view names, from your Outlook Calendar, choose View > Arrange By > Current View. Typically, the first two views are Day/Week/Month and Day/Week/Month View With AutoPreview, respectively. You can also use other views as long as the views contain Day, Today, Work Week, Week, and Month buttons required by the Siebel application.

5 Proceed to "Enabling Embedded Outlook Calendar Visibility."

Enabling Embedded Outlook Calendar Visibility

To allow user visibility to the Embedded Outlook Calendar, the following conditions must be true:

- An administrator must map the Outlook user to a Siebel user login. To do this, see "Setting SSSE Group and User Access Controls" on page 118.
- The Siebel user must have a responsibility that includes the HI Activity Outlook Calendar View. You can accomplish this task in one of the following ways:
  - Assign the HI Activity Outlook Calendar View to an existing responsibility that is already assigned to the desired users.
  - Assign the Embedded Outlook Calendar responsibility to the desired users. See the following procedure.

- The copy of Outlook on the user's machine must be configured to use the user's profile by default, rather than prompting the user to select a profile.
- The machine from which the user accesses Embedded Outlook Calendar must be able to communicate with the user’s Exchange Server. For more information consult your Microsoft Exchange documentation.
- The user must log into the machine using the Active Directory login that corresponds to the PIM User Identifier that is set up in the User Map of the Siebel application.

If the previous conditions are true, then users are able to access their Outlook calendars from the Calendar tab of the Siebel application; however this does not make sure that their Outlook calendars are synchronized with their Siebel calendars. To set calendar and user synchronization, see “Setting Siebel Domain-Level Synchronization” on page 111, and “Enabling or Disabling User Synchronization” on page 123.

NOTE: If you want the user to have access to only the Embedded Outlook Calendar, then you must remove the HI Activity Calendar View, eCalendar Daily View, eCalendar Weekly View, and eCalendar Monthly View from the user’s responsibilities.

This task is a step in “Process of Setting Up Embedded Outlook Calendar” on page 167.

To assign Embedded Outlook Calendar responsibility to a user

1. From the Siebel application menu, choose Navigate > Site Map > Administration - Application > Responsibilities.
2. In the Responsibilities list, select the Embedded Outlook Calendar record.
3. In the Users list, click New, and then select a user.

Related Topics

“About Siebel Calendars and Views” on page 166

About Using Embedded Outlook Calendar

The Embedded Outlook Calendar is a fully functional Outlook client that functions the same as the Microsoft Outlook application. However, EOC has the following limitations:

- If another user logs in to the Siebel application from your machine, the EOC automatically switches to the Siebel calendar. This is because your machine cannot display the login user's EOC.
- It is not possible to view another user’s EOC. If you attempt to view another user’s calendar from your EOC using the Owner drop-down list, the other user’s calendar displays as a Siebel calendar (HI Activity Calendar View).

About Embedded Outlook Calendar and the Siebel Mobile Web Client

If your computer is set up to use the Siebel Mobile Web Client with a local database and file system, and to use Microsoft Outlook in offline mode, you can use Embedded Outlook Calendar even when your computer is not connected to a network. The following capabilities are available in this situation:

- If a user has a responsibility that grants visibility for the HI Activity Outlook Calendar View, then the Embedded Outlook Calendar is the only calendar view that the Siebel application displays when that user is connected to the local database.
- Records that are created in the Embedded Outlook Calendar are stored on the Microsoft Exchange Server if Outlook is connected to the server, and in a local file if Outlook is being run offline.
- Records that are created in the Siebel application are stored in the local database.
- Records are not completely synchronized until all of the following have taken place:
  - Outlook synchronizes locally stored data with the Exchange Server
  - Siebel Mobile Web Client synchronizes with the Siebel Enterprise or Regional Database
  - SSSE synchronizes the Exchange Server with Oracle's Siebel Enterprise Database

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