

**Oracle® Collaboration Suite**

Migration and Coexistence Guide

10g Release 1 (10.1.1)

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Oracle Collaboration Suite Migration and Coexistence Guide, 10g Release 1 (10.1.1)

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# Preface

This guide describes how to migrate e-mail and calendar data from source systems, such as Microsoft Exchange, Netscape, and Lotus Domino server to Oracle Collaboration Suite.

This preface contains these topics:

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documents](#)
- [Conventions](#)

## Audience

The Migration and Coexistence Guide is intended for system administrators, e-mail administrators, and people involved in planning e-mail and calendaring systems for organizations and migrating users to Oracle Collaboration Suite from Oracle eMail Server 5.2.x, Microsoft Exchange 5.0/5.5/2000/2003, Lotus Domino Server R5, GroupWise 6.0, and Samsung Contact 7.1.0 (formerly HP OpenMail). This document is intended to help perform the following tasks:

- Planning migration tasks
- Performing migration tasks
- Performing postmigration tasks

To use this document, you must have an understanding of the components of Oracle Collaboration Suite.

## Documentation Accessibility

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## Related Documents

For more information, see these Oracle resources:

- *Oracle Mail Administrator's Guide*
- *Oracle Calendar Administrator's Guide*
- *Oracle Calendar Application Developer's Guide*
- *Oracle Calendar Reference Manual*

## Conventions

The following text conventions are used in this document:

<b>Convention</b>	<b>Meaning</b>
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

# Part I

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## Introduction

This part contains a chapter that introduces the migration tools and options.

Part I contains the following chapters:

- [Chapter 1, "Introducing Oracle Collaboration Suite Migration Tools and Options"](#)





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# Introducing Oracle Collaboration Suite Migration Tools and Options

This chapter provides an overview of the Oracle Collaboration Suite migration tools and options for e-mail and calendar.

This chapter contains the following sections:

- [Oracle Collaboration Suite 10g Mail Migration Tool: An Overview](#)
- [The E-mail Migration Process](#)
- [Oracle Calendar Migration Tools and Options: An Overview](#)

## Oracle Collaboration Suite 10g Mail Migration Tool: An Overview

Oracle Collaboration Suite Email Migration Tool is used to migrate from legacy source systems to the Oracle Collaboration Suite 10g Mail component of Oracle Collaboration Suite. It uses plug-ins developed to migrate from third-party e-mail systems, which include the following:

- Microsoft Exchange Server versions 5.0 and 5.5
- Microsoft Exchange Server 2000 and 2003
- Lotus Domino Server release 5
- Novell GroupWise 6.0
- Samsung Contact 7.1.0 (formerly known as HP OpenMail)
- Other IMAP4 rev1 compliant e-mail servers

Oracle Collaboration Suite Email Migration Tool is specifically designed to migrate large e-mail systems, such as:

- Corporate installations that generally have large mailboxes
- Internet service providers (ISPs) that have a large number of users with small mailboxes

You can install and run Oracle Collaboration Suite Email Migration Tool from either the source, the target, or any other intermediate system. To perform a migration, a system administrator requires the following:

- The base Oracle Collaboration Suite Email Migration Tool
- A plug-in developed specifically for the source e-mail server
- System administrator privileges on the source e-mail server

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**Note:** Plug-ins for the preceding source e-mail systems are packaged with the Oracle Collaboration Suite Email Migration Tool.

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The plug-in communicates with the source e-mail system to extract data from the source message store, which it saves in a format that is understood by the migration tool. Once the required files are generated, the migration tool reads the files and migrates them to Oracle Collaboration Suite. The plug-in and Oracle Collaboration Suite Email Migration Tool communicate through an API.

## Oracle Mail Migration Features

Features of Oracle Mail migration include:

- Two-phase migration: The e-mail migration spans across two phases, premigration and user migration. This facilitates large-scale migration of users and data with minimal downtime.
- E-mail notifications: After creating the new user accounts and completing the migration process, users are notified about the new accounts.

Oracle Collaboration Suite Email Migration Tool performs the following tasks:

- Provisions users on Oracle Collaboration Suite and defines user name creation policies on the target system
- Consolidates domains
- Maintains mail delivery throughout the migration process to eliminate downtime
- Maintains mail delivery to the user if a data migration error occurs for a particular account

## The E-mail Migration Process

E-mail migration is an intricate process, which requires migration of the following:

- Account information, including user names, public aliases, and distribution lists
- Data, including messages, folders, shared folders, and server-side rules
- Web client address books

In addition, the migration process requires changes to the Simple Mail Transfer Protocol (SMTP) routing so that future messages are directed to the Oracle Mail server.

Oracle Mail migration involves the following tasks:

1. Running the migration setup wizard to configure the migration
2. Extracting directory information from the source system
3. Loading information into migration tool and migration repository
4. Provisioning users on Oracle Collaboration Suite
5. Creating batches of users
6. Migrating data
7. Verifying the migration

This section contains the following:

- [Provisioning Users](#)
- [Migrating Data](#)
- [Migrating Other Objects](#)

## Provisioning Users

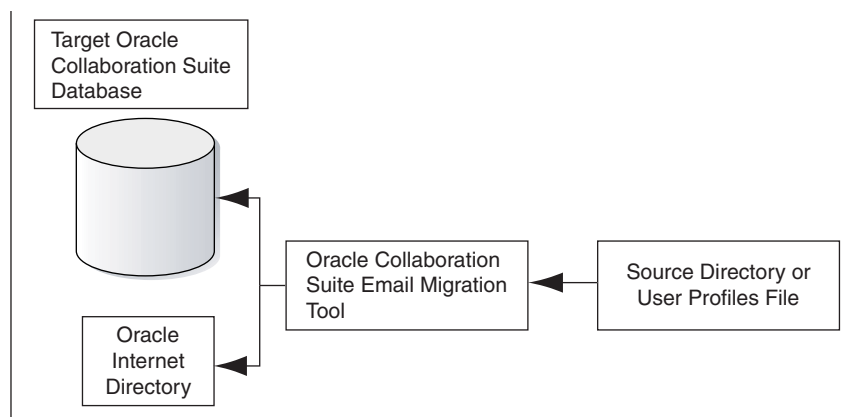
Oracle Collaboration Suite Email Migration Tool extracts account information from the source directory server or user profiles and places it into the target Oracle Collaboration Suite and the target Oracle Internet Directory, as shown in [Figure 1-1](#).

---

**Note:** Some plug-ins do not support migrating all objects. Therefore, the objects that can be migrated depend on the source system.

---

**Figure 1-1** User Provisioning



## Migrating Data

Migrating user data is a major part of migration and uses the maximum system resources. It is also the most time consuming part of system migration, especially for large e-mail systems. To minimize the downtime that occurs during migration, a two-phase migration can help. Batching users is another way to efficiently manage the time needed to migrate data.

**See Also:**

- [Section , "Performing Data Migration"](#) for more information about premigration
- [Section , "Creating Batches"](#) for more information about batching users

The following operations occur during data migration:

- Messages and folders are migrated

For shared messages, a copy of each message is inserted into the database with a pointer to every recipient of the same message instead of a copy of the message being sent to each recipient. This can save an enormous amount of disk space that would otherwise be taken up by duplicate e-mail messages.

- Server-side rules and address books are migrated
- New messages are routed to Oracle Collaboration Suite
- Successful migration is verified

**See Also:** ["Verifying Migration"](#) for more information about verifying the migration of user data

Oracle Collaboration Suite Email Migration Tool migrates data using migration based on either MBOX or IMAP.

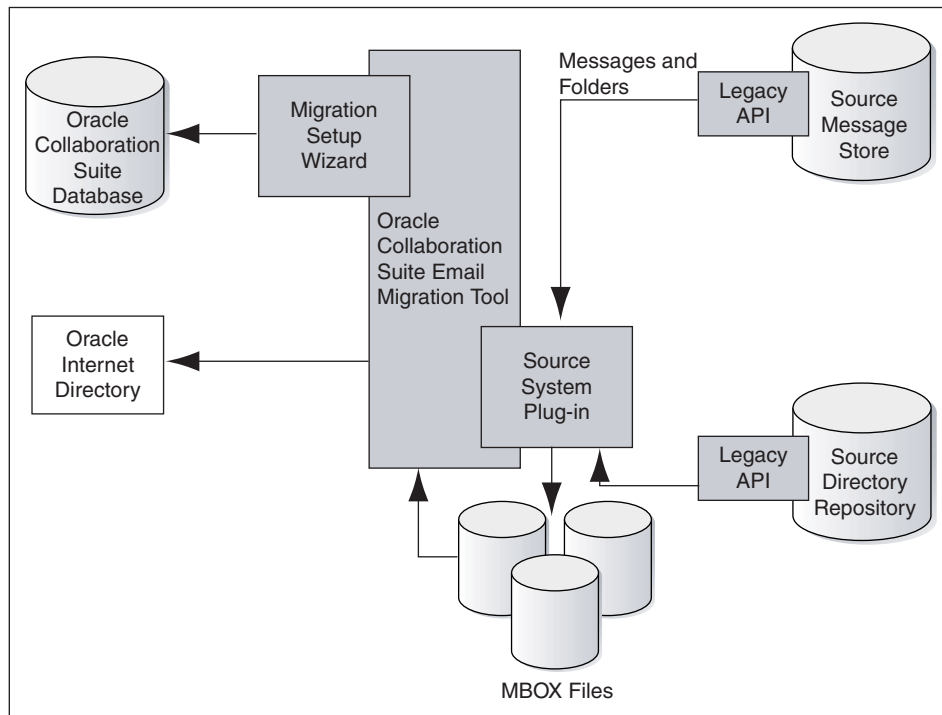
### MBOX-based Migration

Oracle Collaboration Suite Email Migration Tool invokes a plug-in to extract the folders and mails using the proprietary protocol of the source system, storing the extracted information in an MBOX format on the file system. The migration tool reads these files to migrate the data to Oracle Collaboration Suite.

The Oracle Collaboration Suite Email Migration Tool plug-in creates a collection of MBOX files for each user in a staging directory. Each MBOX file represents an e-mail folder and the plug-in appends messages to this file.

An overview of the MBOX-based migration process is shown in [Figure 1-2](#).

**Figure 1-2 Overview of an MBOX-based Migration**



**See Also:** [Section , "Step 1: Specifying Mail System Objects"](#) on page 3-4 for information on selecting a mail system object

## IMAP-Based Migration

If no plug-in is available for your source e-mail system, and the system supports IMAP, Oracle Collaboration Suite Email Migration Tool can migrate users through this protocol. In this scenario, the migration tool performs an IMAP login to the source server for every user, retrieves the mail data, and transfers the data to Oracle Collaboration Suite. So, the migration tool needs to know the source IMAP password from every user. Because there is no direct way to retrieve the user's password from the source system, the source user's password has to be provided in the user list file before loading the users for mail migration. Also, when migrating to a different e-mail domain, the new domain name must be specified in the user list file.

---

**See Also:** "User List File Format (XML)" in Appendix A, "Plug-In Generated File Formats".

---

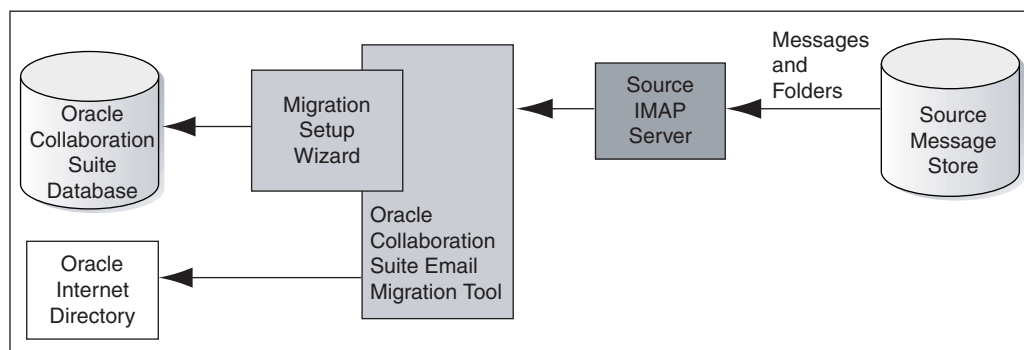
During an IMAP-based migration, the Oracle Collaboration Suite Email Migration Tool extracts the data from the source e-mail system message store and places it directly into the Oracle Collaboration Suite message store, as shown in [Figure 1-3](#).

---

**Note:** In IMAP-based migration, mail data is not written to intermediate files during the migration process.

---

**Figure 1-3 Overview of an IMAP-based Migration**




---

**Note:** As long as you have a plug-in, MBOX-based migration can be used in an IMAP-supported source e-mail server to avoid source password requirements. IMAP-based migration requires user passwords to be provided.

---

## Migrating Other Objects

Oracle Collaboration Suite Email Migration Tool extracts public aliases and distribution lists from the source e-mail system and migrates them to Oracle Collaboration Suite. The tool also migrates shared folders and address books from the source e-mail system to Oracle Collaboration Suite.

For a complete list of migration tasks supported by source systems, refer to "[Choosing the Migration Options](#)".

## Oracle Calendar Migration Tools and Options: An Overview

Migrating from an existing calendar system to Oracle Collaboration Suite enables enterprises to deploy a single architecture for all collaborative applications, which in turn, reduces administrative efforts. However, Oracle Calendar migration is an intricate process that requires importing calendar data across networks for coexistence. For this reason, most Oracle Collaboration Suite customers rely on Oracle Consulting or an Oracle certified partner for performing the migration.

Oracle provides tools and utilities to migrate calendar data across various platforms including Microsoft Exchange, MeetingMaker, and Netscape. To preserve the working environment, this migration includes calendar data and other objects, such as directory information, private and public distribution lists, and aliases. The main platforms that can be migrated to Oracle Calendar are:

- Microsoft Exchange Server
- MeetingMaker
- Netscape Calendar

In addition, Oracle Calendar supports the iCalendar standard. You can migrate calendar data from any platform that support this format.

**See Also:** [Chapter 8, "Migrating Calendar Data Using the iCalendar Representation"](#) for information about the `unicical` utility that is used to migrate calendar data in the iCalendar format.

## Oracle Content Services Migration Options: An Overview

Oracle Content Services provides an API and tools that enable migration of data, such as users, metadata, and libraries, from legacy file storing and sharing systems, such as Novell.

# Part II

---

## E-mail Migration

This part contains information about planning for an e-mail migration and performing the migration tasks.

Part II contains the following chapters:

- [Chapter 2, "Migration Planning and Installation"](#)
- [Chapter 3, "Using Oracle Collaboration Suite 10g Mail Migration Tool"](#)





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## Migration Planning and Installation

This chapter provides information about the premigration tasks required for using Oracle Collaboration Suite Email Migration Tool. In addition, the chapter describes the installation process of the migration tool.

This chapter contains the following sections:

- [Preparing for Migration](#)
- [Meeting System-Specific Requirements](#)

### Preparing for Migration

Before starting the e-mail migration, you need to ensure that Oracle Collaboration Suite and Oracle Internet Directory have been installed on the target system. In addition, the source e-mail system should be running for the entire duration of the migration process. You should try to migrate groups of users in a logical manner according to the structure of the enterprise to minimize any disruptions in communication between members of the same organizational unit. Gather preliminary information about the migration, including target domain structure, user namespace, and source domain structure and directory source.

---

---

**Note:** Only the users with Simple Mail Transfer protocol (SMTP) addresses are migrated.

---

---

This section discusses the installation requirements that you need to meet to run Oracle Collaboration Suite Email Migration Tool. This section contains the following:

- [System Requirements](#)
- [Configuration Planning](#)
- [Installing Oracle Collaboration Suite 10g Mail Migration Tool](#)

### System Requirements

The system requirements for the computer on which Oracle Collaboration Suite Email Migration Tool will run are:

- **Memory:** The amount of memory required to perform the migration depends upon specific variables, such as the volume of data to be migrated, profile of the message store, concurrency of the process, and size of messages. The general guideline for minimum memory is 1 GB of RAM.

- **Network Bandwidth:** The network bandwidth requirements are the same as those for Internet Message Access Protocol version 4 (IMAP4) clients, although, for concurrent migrations, more bandwidth is required. Oracle recommends a bandwidth of 100 Mbps for Oracle Collaboration Suite Email Migration Tool.

---



---

**Notes:**

- For a local area network (LAN), the minimum bandwidth requirement for efficient migration is 10 Mbps.
  - If you are performing an MBOX-based migration, a network connection is not necessary. Once the MBOX files are extracted from the source system, the files can be transferred to the target computer using a tape or disc.
- 
- 

- **Intermediate Storage of Data During Migration:** During an MBOX-based data migration, sufficient disk space must be available for intermediate storage of e-mail messages that need to be migrated. The formula for the calculation is as follows:

$$\text{Disk space required} = n * q * 1.5$$

where *n* is the number of users to be migrated and *q* is the quota for each user.

For example, the disk space requirement is 300 MB for migrating 10 users in an MBOX-based migration. This requirement is calculated after assuming a quota of 20 MB for each user, including all the intermediate storage files.

---



---

**Note:** Oracle Collaboration Suite Email Migration Tool does not delete generated MBOX files.

---



---

## Configuration Planning

Configuration planning involves the following tasks:

- [Choosing the Migration Options](#)
- [Planning for Routing Mails](#)
- [Supporting Different Character Sets](#)

### Choosing the Migration Options

Table 2–1 lists the various source e-mail systems supported by Oracle Collaboration Suite Email Migration Tool and the migration tasks supported by each plug-in for the corresponding source e-mail systems.

**Table 2–1 Source E-mail Systems and Migration Tasks Supported**

Objects	MS Exchange 5.0	MS Exchange 5.5	MS Exchange 2000	MS Exchange 2003	Lotus Domino	Novell GroupWise	Samsung Contact	OES 5.2
LDAP-Based User Provisioning	No	Yes	Yes	Yes	Yes	Yes	No	Yes
LDIF-Based User Provisioning	Yes	Yes	No	No	No	No	Yes	Yes
Public Aliases	No	No	No	No	No	Yes	Yes	Yes

**Table 2–1 (Cont.) Source E-mail Systems and Migration Tasks Supported**

Objects	MS Exchange 5.0	MS Exchange 5.5	MS Exchange 2000	MS Exchange 2003	Lotus Domino	Novell GroupWise	Samsung Contact	OES 5.2
Distribution Lists	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Address Books	No	No	No	No	No	No	No	Yes
IMAP-Based Data Migration	No	Yes	Yes	Yes	Yes	No	Yes	Yes
MBOX-Based Data Migration	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Server-Side Rules	Yes	Yes	Yes	Yes	No	No	No	Yes
Shared Folders	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Routing	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

---

**Note:** For e-mail systems other than the ones listed in [Table 2–1](#), all migration tasks are supported. However, none of the extraction options in the migration setup wizard are enabled. You must provide files for each of the e-mail system objects that you want to migrate, according to the formats mentioned in [Appendix A, "Plug-In Generated File Formats"](#).

---

### Planning for Routing Mails

During data migration, if routing is enabled in the migration setup, Oracle Collaboration Suite Email Migration Tool creates forwarding addresses on the source e-mail system for each user. Therefore, the e-mail messages received at the source e-mail system are forwarded to Oracle Collaboration Suite.

---

**Note:** The forwarding addresses created by the migration tool on the source system are not deleted after migration.

---

In the case of inbound and outbound SMTP servers, do the following:

1. Set the `orclMailSMTPRecipientRewritingRules` attribute in Oracle Internet Directory using the Oracle Enterprise Manager as follows:

```
$*@Target_SMTP_Host $1@Target_Domain;description
```

where, `Target_SMTP_Host` and `Target_Domain` are the target SMTP host and the target domain which you need to enter in the Mail Services screen of the migration setup wizard, will be as follows:

```
$*@smtpghost.acme.com $1@acme.com
```

2. Set the `orclMailProcessFlag` attribute in Oracle Internet Directory as `-1` using Oracle Enterprise Manager.
3. Disable the anti-spam check feature for the entire duration of the migration process.
4. Restart the inbound and outbound SMTP servers.

In the case of collapsing domains, set the following recipient rewriting rule:

```
*@source domain $1@target domain
```

where *source domain* and *target domain* are the source domain and target domain which you need to enter in the Mail Services screen, will be as follows:

```
*@$+.acme.com $1@acme.com
```

### Supporting Different Character Sets

Oracle Collaboration Suite can be configured to support different character sets.

Refer to the *Oracle Mail Administrator's Guide* for information about configuring the Oracle Collaboration Suite database to support different character sets.

## Installing Oracle Collaboration Suite 10g Mail Migration Tool

After you ensure that you have met the system requirements for installing Oracle Collaboration Suite Email Migration Tool, you can start the installation. To install the tool:

1. Set ORACLE\_HOME if it is not set already:
  - To set ORACLE\_HOME on UNIX operating systems, do the following:
    - For C-Shell, enter the following at the command prompt:

```
setenv ORACLE_HOME directory_name
```
    - For Korn-Shell, enter the following at the command prompt:

```
set ORACLE_HOME=/directory_name
```

```
export ORACLE_HOME
```
  - To set ORACLE\_HOME on Microsoft Windows operating systems, enter the following at an MS-DOS prompt:

```
set ORACLE_HOME=C:\directory_name
```

In Microsoft Windows, you can also set ORACLE\_HOME by right-clicking the My Computer icon on the desktop, and then clicking **Properties** from the pop-up menu, and then clicking the **Advanced** tab on the System Properties page.
2. Create the following directory structure, if it is not created already:
  - In Microsoft Windows: %ORACLE\_HOME%\oes\migration
  - In UNIX: \$ORACLE\_HOME/oes/migration
3. Unzip the esmigration.zip file in the oes/migration directory.

In UNIX operating systems, navigate to the Oracle home directory and enter the following command at the command prompt:

```
unzip dir_containing_esmigration.zip/esmigration.zip -d $ORACLE_HOME/oes/migration
```

For both the Windows and UNIX-based operating systems, the following files and directories are created where you unzip the esmigration.zip file:

```
help, log, files, bin, images, sql, lib, mesg, and dtd
```
4. Set the JREHOME environment variable to point to the Java Runtime Environment (JRE) directory (version 1.4.2 or higher). You can set up the variable either in the

environment or in the `migrate.cmd` file for Windows or `migrate.sh` file for UNIX.

- To set JREHOME on UNIX, do the following:
  - For C-Shell, enter:
 

```
setenv JREHOME directory_containing_JDK
```
  - For Korn-Shell, enter:
 

```
set JREHOME=/directory_containing_JDK
export JREHOME
```
- To set JREHOME on Windows, enter the following at an MS-DOS prompt:
 

```
set JREHOME=C:\directory_containing_JDK
```

After you install Oracle Collaboration Suite Email Migration Tool, you must choose and set up the appropriate plug-in for your source e-mail system.

## Meeting System-Specific Requirements

This section contains information about the migration requirements that are specific to the source e-mail system. This section contains the following:

- [Preparing for a Microsoft Exchange Migration](#)
- [Preparing for a Lotus Notes Migration](#)
- [Preparing for a Samsung Contact 7.1.0 Migration](#)
- [Preparing for a Novell GroupWise Migration](#)

### Preparing for a Microsoft Exchange Migration

This section discusses the premigration requirements for migrating from Microsoft Exchange 5.0, 5.5, 2000, or 2003.

If you are running Oracle Collaboration Suite Email Migration Tool on a computer other than the one on which Microsoft Exchange is installed, make sure that Microsoft Outlook and Microsoft Exchange Administrator are installed on the computer where Oracle Collaboration Suite Email Migration Tool is running.

[Table 2–2](#) lists the software requirements for migrating from different versions of Microsoft Exchange.

**Table 2–2 Software Requirements for Migrating from Microsoft Exchange**

Microsoft Exchange Version	Microsoft Outlook Client Version	Is Microsoft Exchange Administrator Required?
5.0	2000	Yes
5.5	2000	Yes
2000	2000	Yes
2003	2000	Yes

#### Creating an Administrator Profile

For Microsoft Exchange, you need to create an administrator profile on the computer where Oracle Collaboration Suite Email Migration Tool is installed. Perform the following steps to create an administrator profile:

1. Ensure that Microsoft Outlook is installed on the system and is operating correctly.
2. Create a profile using Microsoft Outlook as follows:
  - a. Click Start, then Settings, and then Control Panel.
  - b. Double-click the Mail icon.
  - c. Click Show Profiles and then click Add.
  - d. Select Microsoft Exchange Server, and enter a name in Profile Name. Ensure that the profile name is the same as the Exchange alias. For example, the Windows user Administrator should have the profile named "Administrator".
  - e. Click Next.
  - f. Enter the name of the server in the Microsoft Exchange Server.
  - g. Enter the name of an administrator mailbox in Mailbox.

## Preparing for a Lotus Notes Migration

When migrating from the Lotus Domino server release 5 to Oracle Collaboration Suite, 10g Release 1 (10.1.1), use the Lotus Notes plug-in with Oracle Collaboration Suite Email Migration Tool. The plug-in works with Lotus Domino version 5.0.8, or higher.

The following requirements should be met to ensure successful migration:

- Lotus Notes must be installed on the computer where the plug-in is run and the Lotus Notes directory should be located in the `system/user` path.
- If you want to perform an MBOX migration, the plug-in assumes that there is one user who has administrator privileges to read the contents of every user's e-mail file. To grant read access to the Lotus Notes administrator, do the following:
  1. Select the Lotus Notes e-mail database for which you need to provide read rights from the Lotus Notes interface.
  2. Click **File, Database**, and then **Access Control**.

---

---

**Note:** You do not need to perform this step if the access control list is already open.

---

---

3. Select the name of the person to whom you want to grant rights from People, Servers, and Groups.
4. Select an access level from the Access Level list box.
5. Select the appropriate options to give permission to the Lotus Notes administrator to perform the following:
  - Create documents
  - Delete documents
  - Create personal agents
  - Create personal folders/views
  - Create shared folders/views
  - Create LotusScript Agent
  - Read public documents

- Write public documents
- If Oracle Collaboration Suite Email Migration Tool is used to create base accounts on Oracle Collaboration Suite, the Lotus Domino Lightweight Directory Access Protocol (LDAP) server must be running.

### Configuring the Lotus Notes Plug-in

To configure Lotus Notes plug-in, ensure the following:

- The `nesmtd.dll` file has been moved from the `$ORACLE_HOME/oes/migration/bin` directory to the directory where Lotus Notes is installed.

---

**Note:** `nesmtd.dll` should be present only in the Lotus Notes directory and not in any other directory on the computer where the plug-in is run.

---

- The key file (`user.id`) of the administrator, who has permission to access and read all e-mail files, must be available on the computer where Lotus Notes is installed.
- The `KeyFileName` entry in the `notes.ini` file must contain the file name of the administrator's key file. The `notes.ini` file is located in the directory where Lotus Notes is installed.
- The `notes.ini` file contains the following entry. To add this entry to the file, edit the `notes.ini` file, located in the Lotus Notes installation directory, and add the following line at the end of the file followed by a new line feed:

```
EXTMGR_ADDINS=ESMTLD
```

## Preparing for a Samsung Contact 7.1.0 Migration

The following requirements must be met to ensure successful migration from the Samsung Contact server:

- Ensure that the Remote Client Interface service is running on the Samsung Contact server.
- Ensure that the Samsung Contact MAPI Service Provider 08.00.02 is installed, if Oracle Collaboration Suite Email Migration Tool is running on Windows operating systems.
- Ensure that all users on the Samsung Contact server have the administrator user as a real designate. To do this, perform the following steps:
  1. In the Samsung Contact Java Windows client, click **Tools**, then **Preferences**, and then **Designates**.
  2. Click **New**.
  3. Select **Designate**.
  4. Enter the name of the administrator in the Personal name form in the Samsung Contact system directory. For example:  

```
John A. Smith/california,idc,dev,imteam
```
  5. In the Access Area and Capabilities window, grant the minimum access permissions, as follows:

- Inbox: R
- Drafts: R
- Sent: R
- Filing Cabinet: R
- Address Book: R
- Bulletin Board: R
- Personal Directory: R
- Configuration: R/M

6. Select the **Personal**, **Private**, and **Confidential** check boxes.

7. Specify the start and expiry dates.

---

---

**Note:** You can leave the start and expiry dates blank to provide unlimited time for designate access.

---

---

8. Click **OK** in client versions later than 7.5.0.

---

---

**Note:** You need to click **Apply**, and then click **OK** for client versions 7.5.0 and earlier.

---

---

- If Oracle Collaboration Suite Email Migration Tool is running on the Solaris operating system, make sure the computer on which the tool is running has a minimum swap space of 2 GB.

## Preparing for a Novell GroupWise Migration

The following requirements must be met to ensure successful migration from a Novell GroupWise server:

- If Oracle Collaboration Suite Email Migration Tool is used to provision users on Oracle Collaboration Suite, the Novell GroupWise LDAP server must be running, and it should allow anonymous binds.
- Novell Directory Service (NDS) or eDirectory 8.6 with Novell GroupWise 6.0 or higher must be available on the computer where the plug-in is running.

---

---

**Note:** NDS is a Novell directory service, which is also known as eDirectory. Here, NDS and eDirectory are used interchangeably.

---

---

- Message Transfer Agent (MTA) and Post Office Agent (POA) of the Novell GroupWise server installation process must be running on the computer where the plug-in is run.
- The Novell GroupWise client 6.0.2 patch must be applied on the computer from which Oracle Collaboration Suite Email Migration Tool is invoked.
- The Novell Default Settings profile must contain the Novell GroupWise Address Book service.

Locate the Novell Default Settings profile in Windows by clicking **Start**, **Settings**, **Control Panel**, **Mail**, and then **Show Profiles**. The profile is added automatically



when the GroupWise client is installed on the Windows system. If the profile does not contain the service, add it to the profile.

- Users must set up proxy access for the administrator.

The GroupWise administrator must be able to access (proxy) all users on the GroupWise system.

To grant proxy access to the GroupWise administrator:

1. Log in as a GroupWise user.
2. Click **Tools, Options, Security**, and then **Proxy Access**.
3. Click **Address Book** adjacent to the Name field.
4. Choose the GroupWise administrator's name from the Novell GroupWise Address Book. Novell GroupWise Address Book is the GroupWise system address book that holds all users in the GroupWise domain.
5. Select **Mail/Phone** for read access.
6. Click **OK** to grant proxy access to the GroupWise administrator.

To ensure that proxy access is available to the GroupWise administrator:

1. Log in as the GroupWise administrator.
2. Click **File**, and then **Proxy**. A window that contains the Name field and Proxy list is displayed.
3. Click **Address Book** and choose a user who has granted proxy access to the GroupWise administrator.
4. Click **OK**.



---

## Using Oracle Collaboration Suite 10g Mail Migration Tool

This chapter provides information about performing the e-mail migration using Oracle Collaboration Suite Email Migration Tool. The chapter contains the following sections:

- [Task 1: Starting Oracle Collaboration Suite 10g Mail Migration Tool](#)
- [Task 2: Logging On to the Oracle Internet Directory Server](#)
- [Task 3: Setting Up a Migration Session](#)
- [Task 4: Loading Users](#)
- [Task 5: Provisioning Users on the Target System](#)
- [Task 6: Migrating Public Aliases](#)
- [Task 7: Migrating Distribution Lists](#)
- [Task 8: Migrating Data](#)
- [Task 9: Migrating Shared Folders](#)
- [Task 10: Migrating Oracle WebMail Address Books](#)
- [Modifying Migration Parameters](#)
- [Postmigration Administrator Responsibilities](#)

### Task 1: Starting Oracle Collaboration Suite 10g Mail Migration Tool

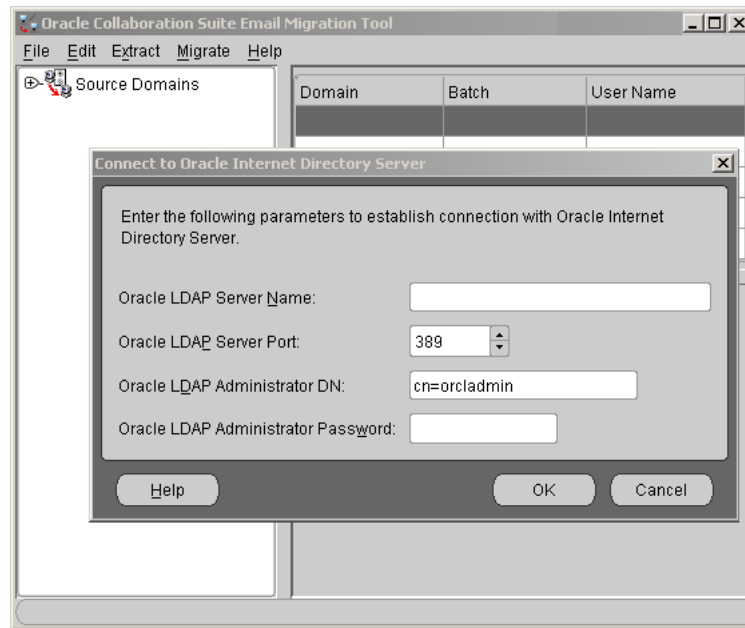
To start Oracle Collaboration Suite Email Migration Tool on UNIX, run the `migrate.sh` script located in the migration tool `bin` directory by entering the following command at the command prompt:

```
<prompt> $ORACLE_HOME/oes/migration/bin/migrate.sh
```

To start the migration tool on Windows, double-click the `migrate.cmd` file located in the `bin` directory of the tool, or enter the following command at the command prompt:

```
<prompt> %ORACLE_HOME%/oes/migration/bin/migrate.cmd
```

The Connect to Oracle Internet Directory Server screen is displayed as shown in [Figure 3-1](#).

**Figure 3–1 Connecting to Oracle Internet Directory**

## Task 2: Logging On to the Oracle Internet Directory Server

To connect to the Oracle Internet Directory server:

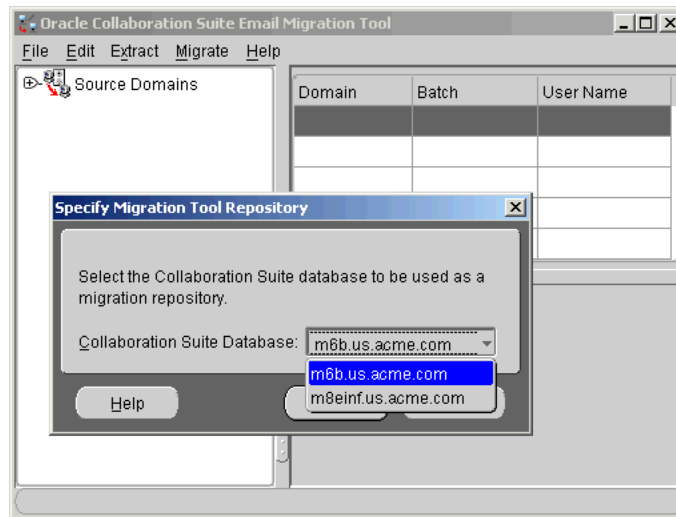
- Specify the following Oracle Internet Directory information:
  - Oracle LDAP Server Name: Enter the host name of the computer where the Oracle Internet Directory server is running.
  - Oracle LDAP Server Port: Enter the port number on which the Oracle Internet Directory server is listening. The default port number for LDAP is 389. Update the port number if the port number is different.
  - Oracle LDAP Administrator DN: Enter the directory manager distinguished name.
  - Oracle LDAP Administrator Password: Enter the directory manager password.
- Click **OK**.

Oracle Collaboration Suite Email Migration Tool lists the available databases, and you can select any of them. The selected database is used to maintain the migration parameters. If only one database is available, Oracle Collaboration Suite Email Migration Tool automatically connects to the database without prompting the user to select a database.

### Specifying the Oracle Collaboration Suite 10g Mail Migration Tool Repository

You need to select a database from Oracle Collaboration Suite Database list, as shown in [Figure 3–2](#).

Figure 3–2 Selecting the Oracle Collaboration Suite Database



Oracle Collaboration Suite Email Migration Tool creates a repository in the `es_mail` user schema on the chosen database. If a migration tool repository exists, Oracle Collaboration Suite Email Migration Tool reuses the repository.

---

**Note:** If Oracle Collaboration Suite Email Migration Tool is run for the first time, a dialog is displayed that prompts you to create a repository instance. Click **OK** to launch the migration setup wizard.

---

## Task 3: Setting Up a Migration Session

The migration setup wizard collects details about the source and target domains, information for setting specific migration options, and notification of successful migration.

You need to perform the following steps by using the migration setup wizard:

- [Step 1: Specifying Mail System Objects](#)
- [Step 2: Specifying Source System Information](#)
- [Step 3: Specifying User Provisioning Options](#)
- [Step 4: Specifying Source LDAP Service Parameters](#)
- [Step 5: Specifying LDAP Entry Translation Options](#)
- [Step 6: Generating Usernames for the New Accounts](#)
- [Step 7: Specifying Mail Migration Options](#)
- [Step 8: Specifying Migration Notifications](#)
- [Step 9: Specifying Mail Services](#)

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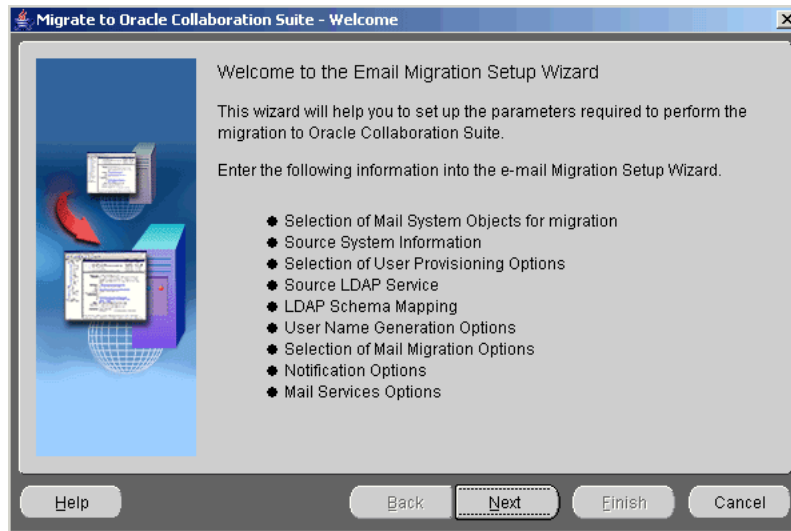
**Note:** The number of required steps is determined by choices made in [Step 1: Specifying Mail System Objects](#).

---

## Step 1: Specifying Mail System Objects

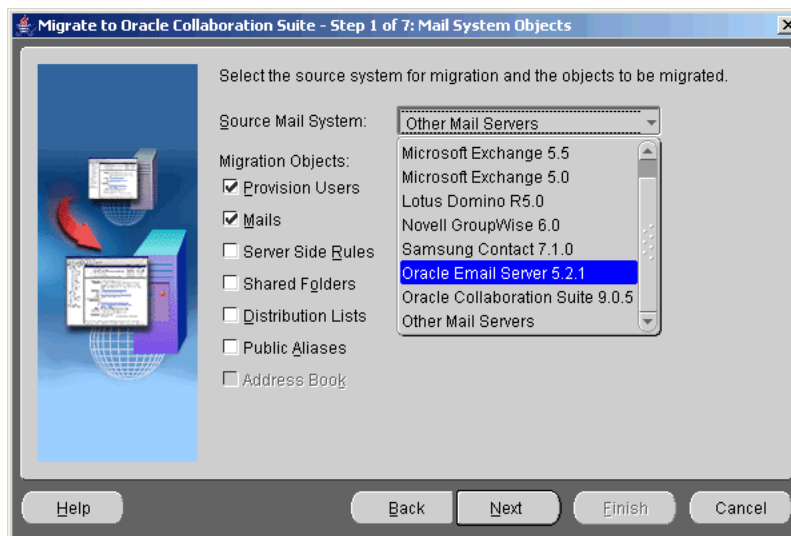
On the Welcome screen of the migration setup wizard, click **Next** as shown in [Figure 3-3](#).

**Figure 3-3** *The Welcome Screen of the Migration Setup Wizard*



The Mail System Objects screen is displayed as shown in [Figure 3-4](#).

**Figure 3-4** *Specifying Mail System Objects*



To specify mail system objects:

1. Select the source e-mail system from the Source Mail System list. The supported source e-mail systems are:
  - Oracle Email Server 5.2.1
  - Microsoft Exchange 2000 and 2003

- Microsoft Exchange 5.5
  - Microsoft Exchange 5.0
  - Lotus Domino release 5.0
  - Novell GroupWise 6.0
  - Samsung Contact 7.1.0
  - Oracle Collaboration Suite 9.0.5
  - Other Mail Servers that support the IMAP protocol or can generate standard MBOX files
2. Select the supported objects to migrate.  
If you want to create accounts, select **Provision Users**. To migrate e-mail, select **Mails**.
  3. Click **Next**. The Source System Information screen specific to the selection you made from the **Source Mail System** is displayed.

## Step 2: Specifying Source System Information

This section discusses how to specify source system information for different legacy e-mail systems.

This section contains the following:

- [Specifying Oracle Email Server System Information](#)
- [Specifying Microsoft Exchange Source System Information](#)
- [Specifying Lotus Notes Source System Information](#)
- [Specifying Novell GroupWise Source System Information](#)
- [Specifying Samsung Contact Source System Information](#)

### See Also:

- ["Preparing for Migration"](#) on page 2-1 for source system prerequisites
- [Table 2-1](#) on page 2-2 for a list of migration tasks supported by each source system

## Specifying Oracle Email Server System Information

[Figure 3-5](#) displays the Source System Information screen for Oracle 5.2.

**Figure 3–5 Specifying Oracle Email Server System Information**

To specify the information for Oracle 5.2 source system:

1. In the DCN Information section, provide the following information:
  - Domain Name: Enter the domain for the Domain Configuration Node (DCN) of the Oracle Mail server.
  - Host: Enter the host name of the Oracle Mail server DCN.
  - Port: Select the port number of the Oracle Mail server DCN. This is the SQLNet port number of the listener that is running on the DCN.
  - SID: Enter the system identifier of the Oracle Mail server DCN.
  - Password: Enter the account password for the DCN. This should be the password of the OO schema.
2. In the Node Information section, specify the following information:
  - Node Name: Enter the Oracle Mail server node name from which you want to migrate.
  - Host: Enter the host name of the node.
  - Port: Select the port number on which the node listens. This is the SQLNet port number of the listener that is running on the DCN.
  - SID: Enter the system identifier of the node.
  - Password: Enter the password for the node. This should be the password of the OO schema.
3. Click **Next**.

---

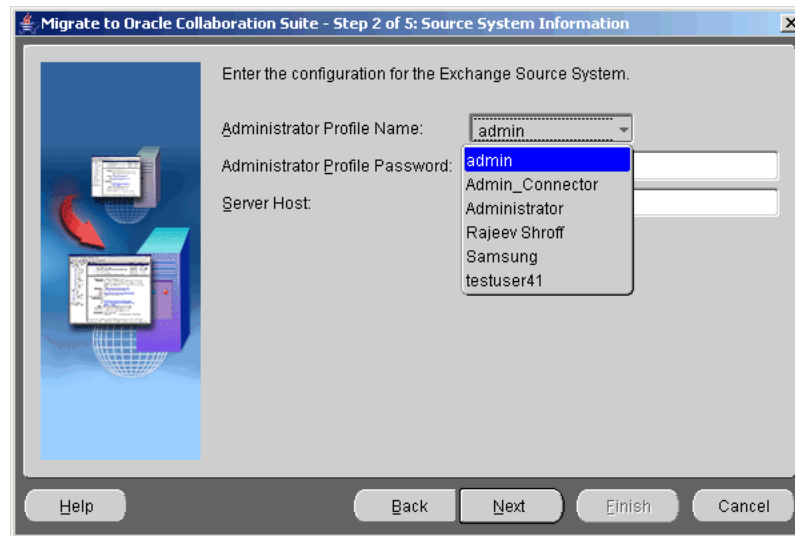
**Note:** You need to provide information for the node that is to be migrated, even if the node is the DCN.

---

### Specifying Microsoft Exchange Source System Information

Figure 3–6 displays the Source System Information screen for Microsoft Exchange.



**Figure 3–6 Specifying Microsoft Exchange Source System Information**

To specify the information for the Microsoft Exchange source system:

1. Enter the following information in the Source System Information screen:
  - Administrator Profile Name: Select the administrator profile name from the list.
  - Administrator Profile Password: Enter the administrator profile password.
  - Server Host: Enter the Microsoft Exchange directory host name.
2. Click **Next**.

---

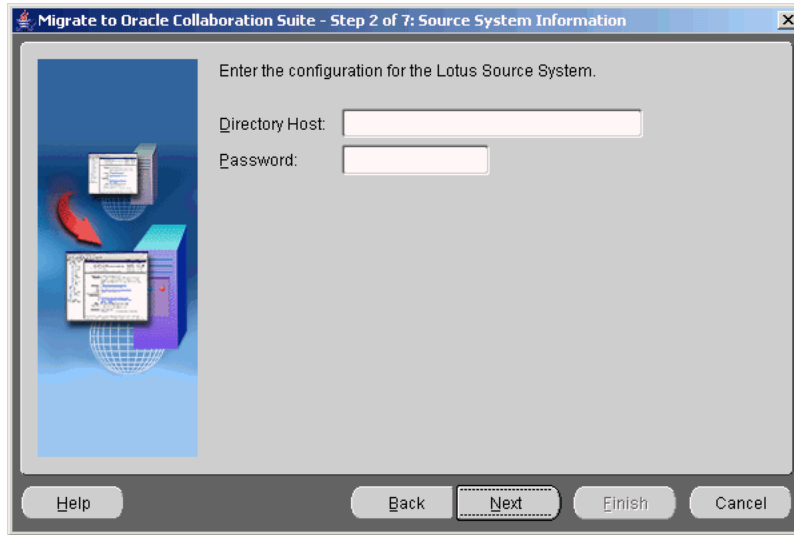
**Note:** The input screen is the same irrespective of the different Exchange versions, such as 5.5, 2000, or 2003.

---

### Specifying Lotus Notes Source System Information

Figure 3–7 displays the Source System Information screen for Lotus Notes.

**Figure 3-7 Specifying Lotus Notes Source System Information**



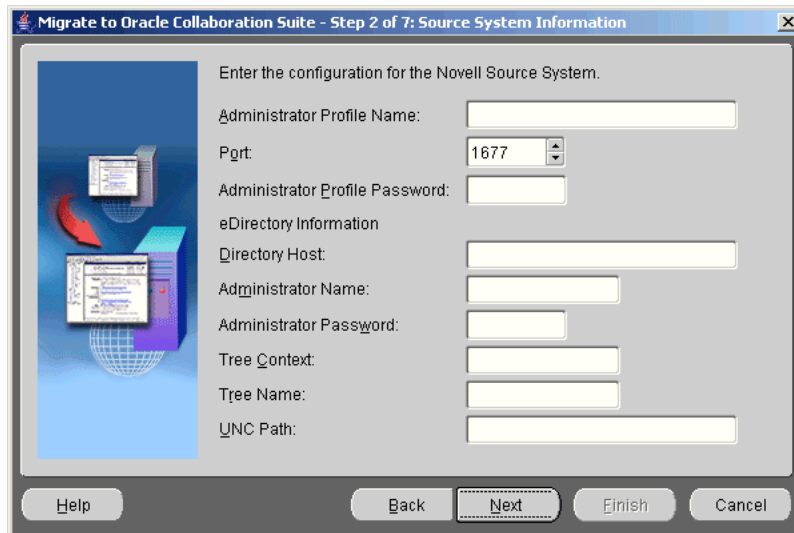
To specify the information for the Lotus Notes source system:

1. Enter the following information in the Source System Information screen:
  - Directory Host: Enter the host name of the computer on which the Lotus Notes directory is running.
  - Password: Enter the password of the Lotus Notes administrator's key file (user.id).
2. Click Next.

### Specifying Novell GroupWise Source System Information

Figure 3-8 displays the Source System Information screen for Novell GroupWise.

**Figure 3-8 Specifying Novell GroupWise Source System Information**



To specify the information for the Novell GroupWise source system:

1. Enter the following information in the Source System Information screen:
  - Administrator Profile Name: Enter the administrator profile name.
  - Port: Select the post office agent port.
  - Administrator Profile Password: Enter the administrator profile password.
2. Enter the following information in the eDirectory Information section:
  - Directory Host: Enter the host name of the GroupWise directory.
  - Administrator Name: Enter the Novell eDirectory administrator name.
  - Administrator Password: Enter the Novell eDirectory administrator password.
  - Tree Context: Enter the GroupWise eDirectory tree context, such as ACME.
  - Tree Name: Enter the name of the Novell eDirectory tree, such as GRPWISSETREE.
  - UNC Path: Enter the path to the shared location of `wpdomain.db` on the GroupWise server, such as `f:\software\domain\grpdomain`.
3. Click Next.

### Specifying Samsung Contact Source System Information

Figure 3–9 displays the Source System Information screen for Samsung Contact server.

**Figure 3–9 Specifying Samsung Contact Source System Information**

Migrate to Oracle Collaboration Suite - Step 2 of 7: Source System Information

Enter the configuration for the Samsung Source System.

Server Host:

Administrator Name:

Administrator Password:

Mailnode for Internet Mail Gateway:

Temporary Directory on the Server:

Help Back Next Finish Cancel

To specify the information for the Samsung Contact source system:

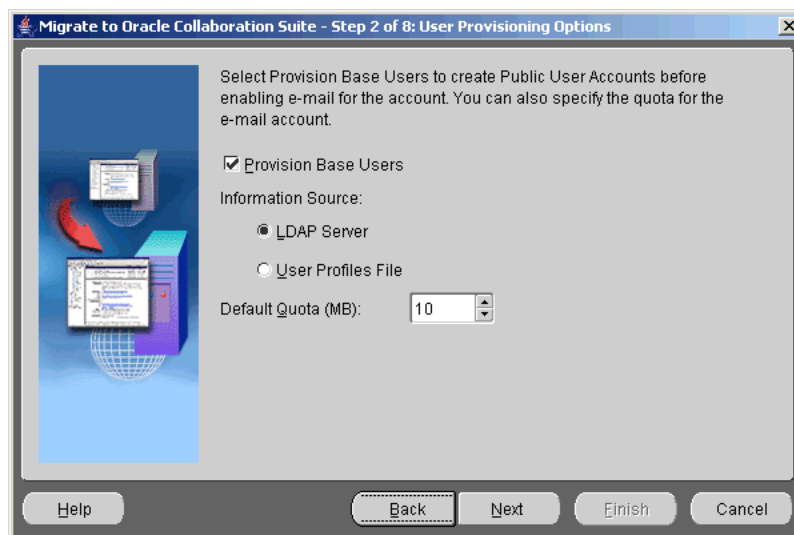
1. Enter the following information in the Source System Information screen:
  - Server Host: Enter the host name of the Samsung Contact server.
  - Administrator Name: Enter the administrator name in the Personal Name form in the Samsung Contact system directory. For example,  
John A. Smith/california,idc,dev,imteam

- Administrator Password: Enter the administrator password.
  - Mailnode for Internet Mail Gateway: Enter the name of the mailnode for the Internet mail gateway. For example,  
unix,mime
  - Temporary Directory on the Server: Enter the path to a temporary directory on the Samsung Contact server with read and write privileges. This directory location will be used by the migration tool during migration.
2. Click Next.

### Step 3: Specifying User Provisioning Options

Specify the user provisioning options as shown in [Figure 3-10](#).

**Figure 3-10** Specifying User Provisioning Options



To specify these options:

1. Select **Provision Base Users** to create public user accounts before enabling e-mail for the account.

---

---

**Note:** If Oracle Collaboration Suite is already installed and populated with users, deselect **Provision Base Users**.

---

---

2. In the Information Source section, select **LDAP Server** if the source system user attributes are maintained on an LDAP server, else select **User Profiles File**.

---

---

**Note:** The Information Source section is activated only if **Provision Base Users** is selected.

---

---

3. Enter a value for Default Quota (MB) for the users who are to be provisioned. A value of 0 indicates infinite quota.

---



---

**Note:** The user quota is applied system wide.

---



---

4. Click **Next**.

## Step 4: Specifying Source LDAP Service Parameters

Figure 3–11 displays the Source LDAP Service screen.

**Figure 3–11** Specifying Source LDAP Service Parameters

Migrate to Oracle Collaboration Suite - Step 3 of 8: Source LDAP Service

Enter the source directory server host, port, Administrator DN, Administrator password and Object Class of the e-mail user.

Directory Host:

Port:

Administrator DN:

Administrator Password:

Object Class of e-mail user:

Help Back Next Finish Cancel

To specify the source LDAP service information:

1. Enter the following information in the Source LDAP Service screen:
  - Directory Host: Enter the host name of the computer on which the source directory server is running.
  - Port: Select the port number on which the source directory server is listening. The default port number for LDAP is 389. Update the port number if your port number is different.
  - Administrator DN: Enter the distinguished name of the directory manager. For all Exchange versions, administrator DN can be of the following format:  
`cn=administrator,dc=acme,dc=com`
  - Administrator Password: Enter the directory manager password. Leave the Admin DN and Admin Password fields empty if the source LDAP server supports anonymous login.
  - Object Class of E-mail User: Enter the object class that identifies the schema of an e-mail user on the source LDAP server.
2. Click **Next**.

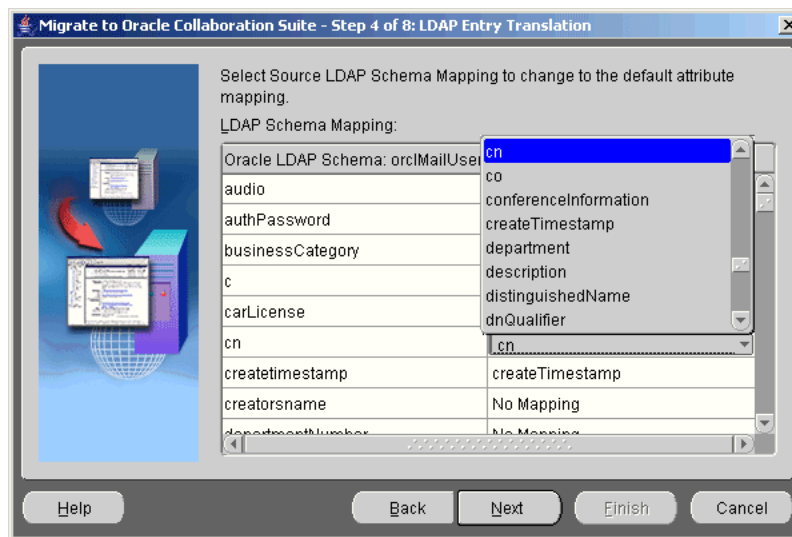
## Step 5: Specifying LDAP Entry Translation Options

In Oracle Collaboration Suite, the `orclperson` object class describes an e-mail user. This object class has the following mandatory attributes that must be mapped to source directory attributes:

- `cn`: Common Name
- `sn`: Last Name or Surname

Figure 3–12 displays how to change the default attribute mapping on the LDAP Entry Translation screen.

**Figure 3–12** Specifying LDAP Entry Translation Options



To change the default attributes:

1. Click the source attribute in the Source LDAP Schema column to display a list of mapping choices and select the appropriate mapping.

The non-mandatory attributes displayed on the target Oracle Internet Directory will have the No Mapping option displayed in the Source LDAP Schema column if the mapping is not found. Click the list to display a list of mappable attributes.

---

**Note:** You need only map these attributes once, because the Oracle Collaboration Suite Email Migration Tool saves the values for the subsequent batches.

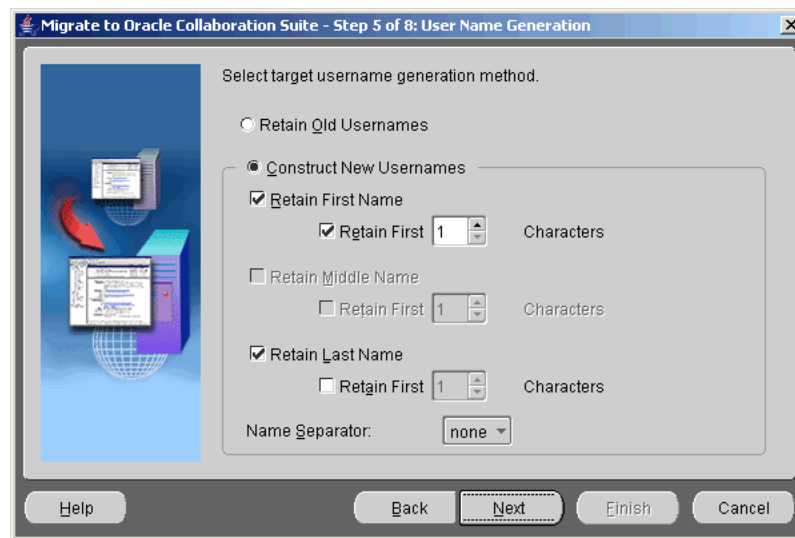
---

2. Click **Next**.

## Step 6: Generating Usernames for the New Accounts

Create the user accounts on the target Oracle Collaboration Suite system as shown in Figure 3–13.

Figure 3–13 Generating Usernames



To create user accounts:

1. Select one of the following options in the User Name Generation screen:

- Retain Old Usernames: Specifies that the target user names remain the same as the source user names.
- Construct New Usernames: Specifies that the Oracle Collaboration Suite Email Migration Tool generates the target user names.

To construct new user names, select the following options:

- Retain First Name: You can choose to retain the first, middle, or last names, or any combination of the three. Select the appropriate option to retain any of the three names. You may retain the first *n* characters of a name by selecting the first *n* characters you want to retain from Retain First check box.
- Name Separator: Choose a separator character from the Name Separator list.

If the first name or middle name is not mapped to any of the attributes of the source LDAP server, the corresponding check boxes will be disabled.

The values for first name, middle name, and last name are picked up from the source LDAP attributes that map to the given name, middle name, and surname of `orclperson` attributes.

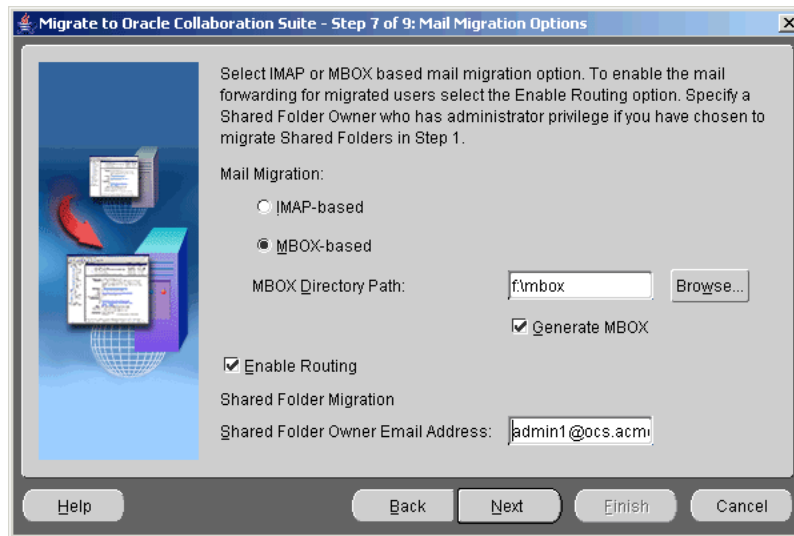
If the target user names are specified in the user list (`users.xml`), these names will be used in all cases.

2. Click Next.

## Step 7: Specifying Mail Migration Options

Specify the mail migration options on the Mail Migration Options screen as shown in [Figure 3–14](#).

Figure 3–14 Specifying Mail Migration Options



To specify:

1. Select one of the following options in the Mail Migration section:
  - **IMAP-based:** If the source e-mail system is IMAP4 rev1 compliant, Oracle Collaboration Suite Email Migration Tool can extract e-mail from the source system using IMAP.
  - **MBOX-based:** Select this option if you want to perform an MBOX-based migration. Select **Generate MBOX** and click **Browse** to specify the MBOX directory path where the MBOX files will be created.

Do not select **Generate MBOX** if you are running Oracle Collaboration Suite Email Migration Tool again after an initial run. The files will already exist and need not be generated again.

If **Generate MBOX** is not selected, Oracle Collaboration Suite Email Migration Tool assumes that the files have been generated externally and have been placed in the location specified in the MBOX Directory Path field.

No extraction of files will occur if **Generate MBOX** is not selected.

---

**Note:** There must be sufficient space on the target disk to store all the e-mail messages being migrated.

---



---

**Note:** The Oracle Mail server plug-in packaged with this release of Oracle Collaboration Suite does not generate MBOX files.

---

2. Select **Enable Routing** to forward e-mail from source system to the new user accounts on the target system, during and after migration.

---

**Note:** If the source e-mail system is Microsoft Exchange, Lotus, or Samsung, and if **Enable Routing** is selected, a copy of the message is forwarded to Oracle Collaboration Suite.

---

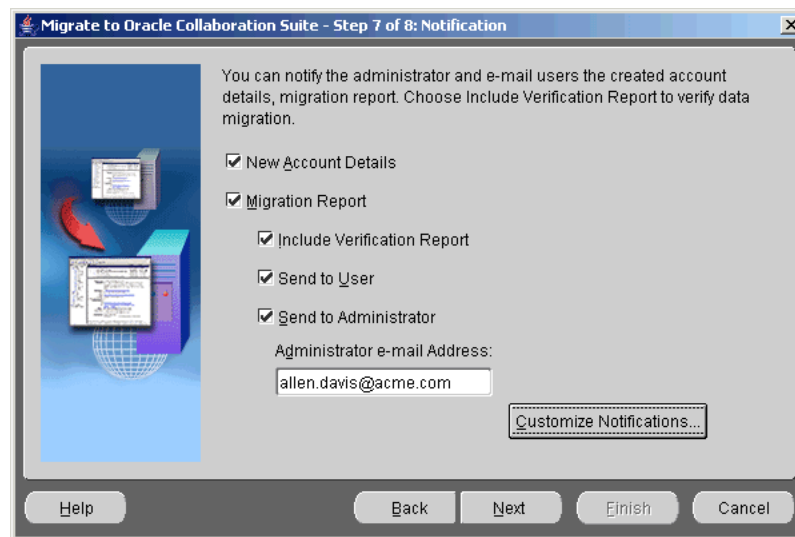


3. In the Shared Folder Migration section, enter the e-mail address of an e-mail user existing in the target system in the Shared Folder Owner Name field. This user is the default owner for shared folders without an owner association.
4. Click **Next**.

## Step 8: Specifying Migration Notifications

Notifications are e-mail messages that inform users about migration events. Specify notifications options on the Notification screen as shown in [Figure 3–15](#).

**Figure 3–15** Specifying Migration Notifications



To specify:

1. Select **New Account Details**.

After the user account is created on the target e-mail server, a message is sent to the user's source e-mail account notifying the new user name, password, and IMAP and SMTP host names.

2. Select **Migration Report**.

When you select **Migration Report**, you can choose to send a message to either the user's target account, the administrator, or both, notifying them that the migration is complete and that the user can begin using the new account.

- Select **Include Verification Report** to attach a verification report to the migration report at the end of every migration.

---

**Note:** When this option is selected, the Oracle Collaboration Suite Email Migration Tool compares the SMTP message ID of every message that is present on the target account with that of the source account. The Oracle Collaboration Suite Email Migration Tool generates a report based on this comparison and sends it as a part of the migration report.

---

- Select **Send to User** to send a migration report to the user.

- Select **Send to Administrator** to send a migration report to the administrator. Enter the e-mail ID of the administrator in the Administrator Email Address field.

---

**Note:** Migration reports are not sent for premigration.

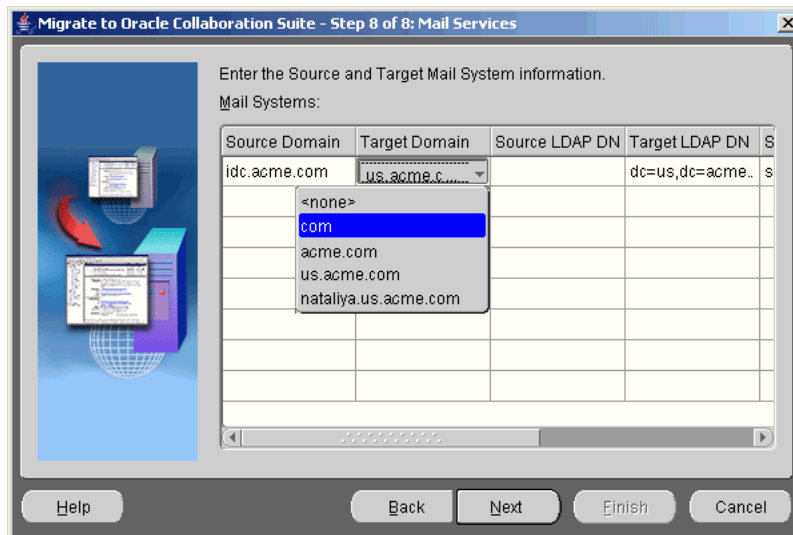
---

3. Click **Customize Notifications** to add header and footer notes to the notifications.
4. Click **Next**.

## Step 9: Specifying Mail Services

Specify the source and target mail system information on the Mail Services screen as shown in [Figure 3–16](#).

**Figure 3–16** Specifying Mail Services



To specify:

1. Enter the following information in the Mail Services screen:

---

**Note:** The columns are displayed based on the user provisioning and mail migration options selected earlier.

---

- Source Domain: Enter the domain name of the source e-mail system.
- Target Domain: Select the target domain name from the list of domain names.
- Source IMAP Host: Enter the source IMAP host name. This appears when the IMAP-based migration option is selected in the Mail Migration Options screen.
- Target IMAP Host: Select the target IMAP host name from the list.
- Source LDAP DN: Enter the LDAP DN for users on the source domain. If you have more than one domain, enter the LDAP DNs for all the domains. Oracle Collaboration Suite Email Migration Tool looks for source account entries

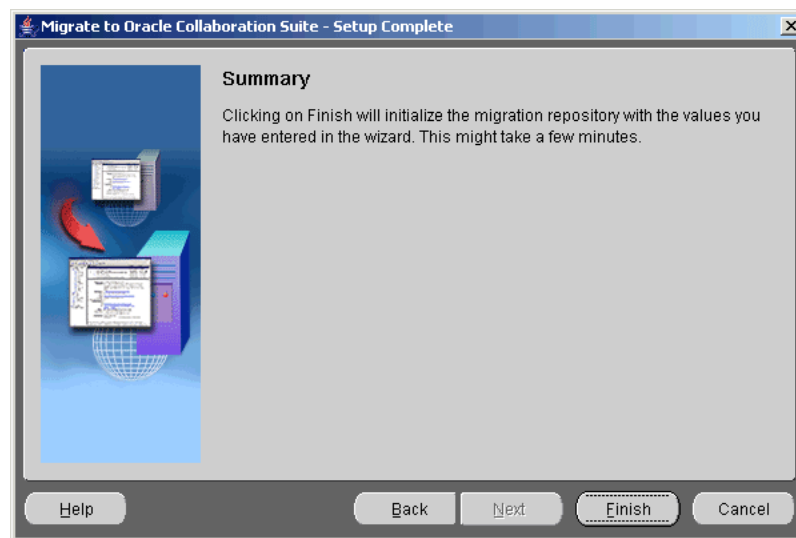
under the DN of the LDAP. The source LDAP DN is specific to each supported source system. For example, in a Microsoft Exchange 2000 mail system for an Active Directory domain `acme.com`, it may be:

```
cn=Users,dc=acme,dc=com
```

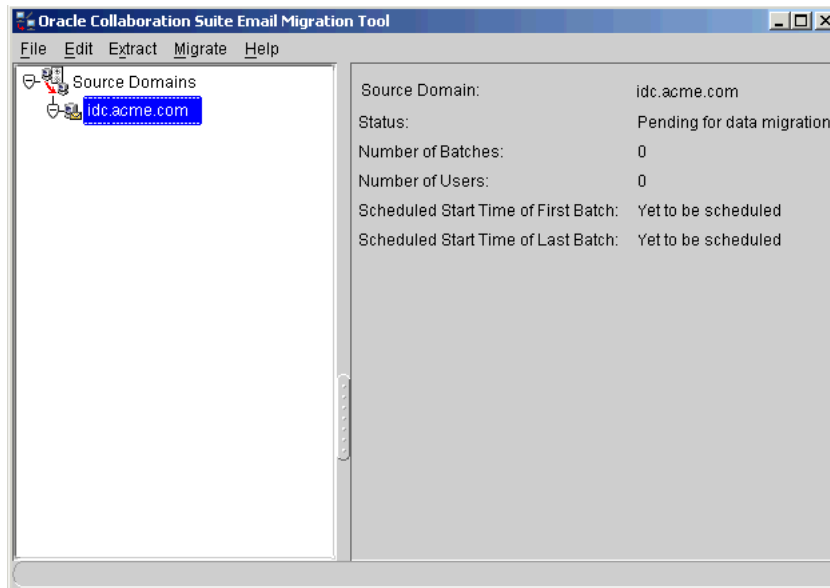
- Target LDAP DN: Select the LDAP DN from the list for the target Oracle Internet Directory on which all users of this domain are created.
  - Target SMTP Host: Select the SMTP host of the target domain from the list.
2. Click **Next**.

The Summary screen is displayed as displayed in [Figure 3-17](#).

**Figure 3-17** The Summary Screen



Clicking **Finish** returns you to the Oracle Collaboration Suite Email Migration Tool main window as shown in [Figure 3-18](#).

**Figure 3–18 Oracle Collaboration Suite Email Migration Tool Main Window**

## Task 4: Loading Users

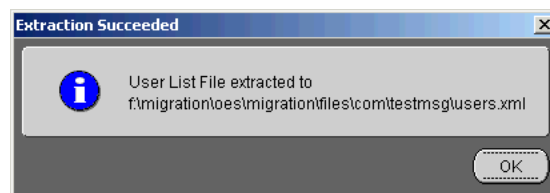
You need to configure the users who will be migrated. The user data is loaded from an XML file. The XML file can be created in either of the following ways:

- Clicking **Extract**, and then **Users**: This invokes the source system-specific plug-in to generate the `users.xml` file.
- Manually writing the `users.xml` file: This manually written `users.xml` needs to comply with `Migration.dtd`, which is shipped along with Oracle Collaboration Suite Email Migration Tool.

In this case, the `users.xml` file must be present in a directory that is determined by the users' source domain. If the source domain specified in Mail Services wizard page is `acme.com`, the `users.xml` file for that domain should be in the following path:

```
$ORACLE_HOME/oes/migration/files/com/acme/users.xml
```

Figure 3–19 displays the path of the `users.xml` file.

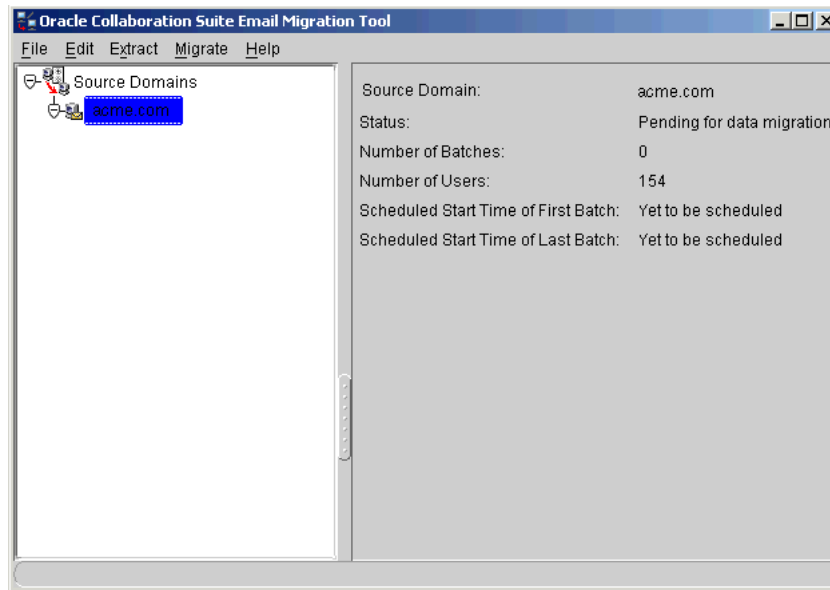
**Figure 3–19 Path of the `users.xml` File**

You can load the `users.xml` file by clicking **File**, and then **Load Users**. This loads all the users into the migration schema. You can also reload the same set of users after modifying the `users.xml` file. For example, you have selected the IMAP-based

migration without specifying the `sourceimappasswd` attribute in the `users.xml` file. You can later edit the XML file to add `sourceimappasswd` to all users, and then reload the users by clicking File, and then Load Users.

Figure 3–20 displays the number of users who have been successfully loaded.

**Figure 3–20 Oracle Collaboration Suite Email Migration Tool Main Window: Pending for Data Migration**



## Task 5: Provisioning Users on the Target System

To provision users from the source directory server to Oracle Collaboration Suite, perform the following steps:

1. If you selected **User Profiles File** from the User Provisioning Options screen, click **Extract** and then **User Profiles** to generate the `user_profiles.ldif` file.

---

**Note:** If you want to extract users from multiple domains, select each domain and perform Step 1.

---

**See Also:** [Appendix A, "Plug-In Generated File Formats"](#) for more information about user profile file formats

2. Click **Migrate**, and then **Provision Users** from the Oracle Collaboration Suite Email Migration Tool menu bar to create user accounts in the target Oracle Internet Directory.

## Task 6: Migrating Public Aliases

Prior to migrating public aliases, ensure that all user accounts have been provisioned.

To migrate public aliases, do the following:

1. If you chose to migrate public aliases, click **Extract** and then **Public Aliases** from the Oracle Collaboration Suite Email Migration Tool menu bar to generate the `public_aliases.ldif` file in the `files` directory. Figure 3-21 displays the path of the `public_aliases.ldif` file.

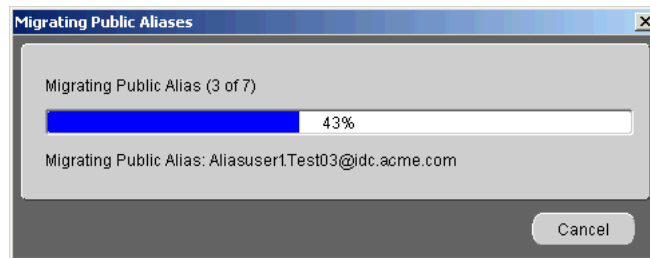
**Figure 3-21 Path of the `public_aliases.ldif` File**



2. Click **Migrate** and then **Public Aliases** from the Oracle Collaboration Suite Email Migration Tool menu bar to create the public aliases on the target e-mail server.

To cancel migration of public aliases, click **Cancel** on the status dialog that is displayed when you start to migrate the public aliases as shown in Figure 3-22.

**Figure 3-22 The Migrating Public Aliases Status Dialog**




---

**Note:** If you cancel migration of public aliases, rollback does not occur and you can safely restart migration. The e-mail objects that were created before you canceled migration are not re-created when migration is re-commenced.

---

## Task 7: Migrating Distribution Lists

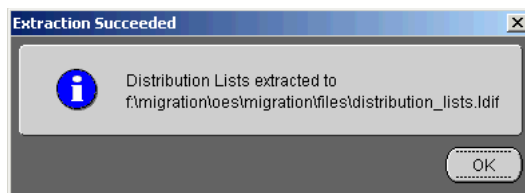
There are two phases in the migration of distribution lists:

- All distribution lists are created
- The distribution lists are populated with users

The status bar is immediately displayed, and it shows a progress when distribution lists are being populated with users.

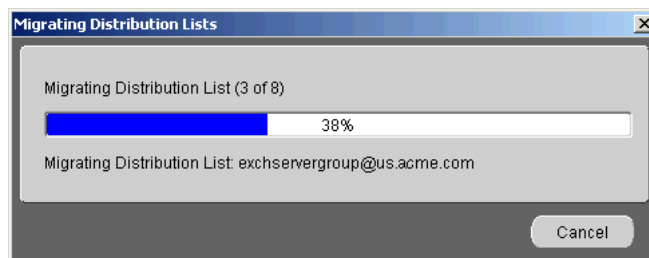
To migrate distribution lists, do the following:

1. Click **Extract** and then **Distribution Lists** from the Oracle Collaboration Suite Email Migration Tool menu bar to generate the `distribution_lists.ldif` file in the `files` directory. Figure 3-23 displays the path of the `distribution_lists.ldif` file.

**Figure 3–23 Path of the distribution\_lists.Idif File**

2. Click **Migrate** and then **Distribution Lists** from the Oracle Collaboration Suite Email Migration Tool menu bar to create the distribution lists on the target e-mail server.

To cancel the migration of distribution lists, click **Cancel** on the status dialog that is displayed when you start to migrate the distribution lists as displayed in [Figure 3–24](#).

**Figure 3–24 The Migrating Distribution Lists Status Dialog**


---

**Note:** If you cancel migration of distribution lists, rollback does not occur and you can safely restart migration. The e-mail objects that were created before you canceled migration will not be re-created when the migration is recommenced.

---

## Task 8: Migrating Data

This section contains the following topics:

- [Creating Batches](#)
- [Scheduling Batches and Migrating User E-mails](#)
- [Performing Data Migration](#)

### Creating Batches

Prior to migrating data, you must create and schedule batches for migration.

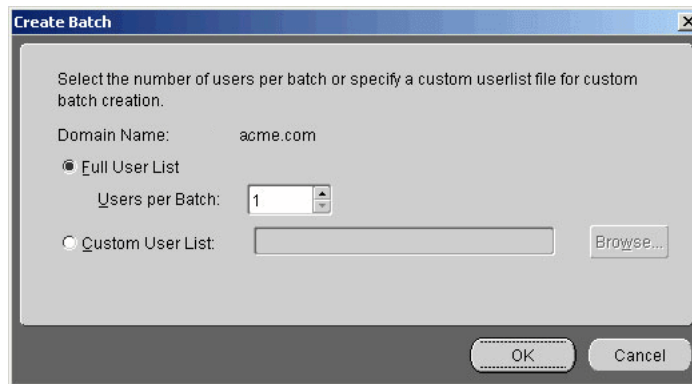
Using Oracle Collaboration Suite Email Migration Tool, you can create a batch either by designating the number of users for each batch, or by creating a custom batch.

Batch creation is done on a domain basis. To create a batch by domain, do the following:

1. Click **Source Domain** on the directory tree on the left side of the Oracle Collaboration Suite Email Migration Tool screen.
2. Select the appropriate domain.

3. Click **File** and then **Create Batch**. The Create Batch dialog is displayed as shown in [Figure 3–25](#).

**Figure 3–25** *Creating Batches*



4. Create batches using one of the following methods:
  - Select **Full User List** and enter or use the arrows to select the number of users in the **Users per Batch** field. For example, if you have 100 users and specify 5 users in each batch, 20 batches are created.
  - Select **Custom User List** to create a custom batch. Use this option to batch a subset of the loaded users.

Create a file containing the users formatted according to the following example:

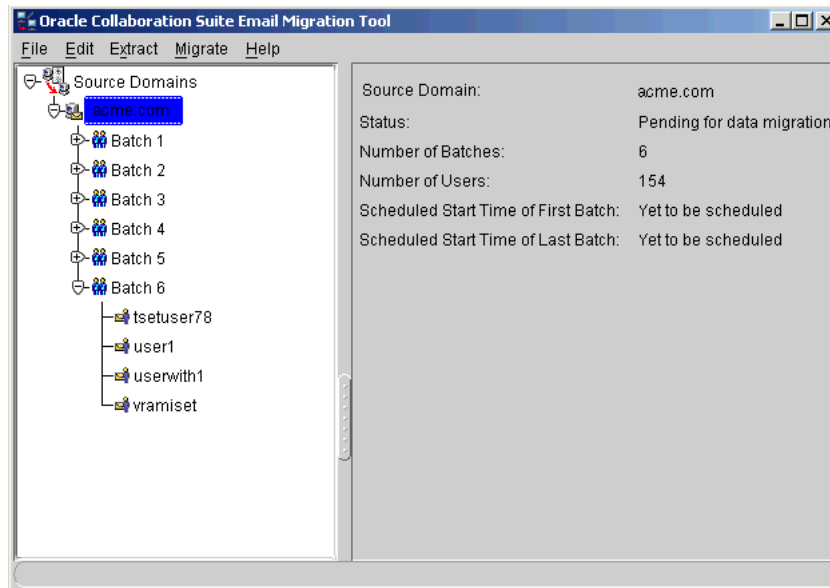
```
<userlist>  
  <user sourceimapuserid="test1" targetimapuserid="Test2" />  
</userlist>
```

Enter the path to the custom batch file in the adjacent field or click **Browse** to locate the file.

When the batches are created, the status is displayed as shown in [Figure 3–26](#).



Figure 3–26 Created Batches



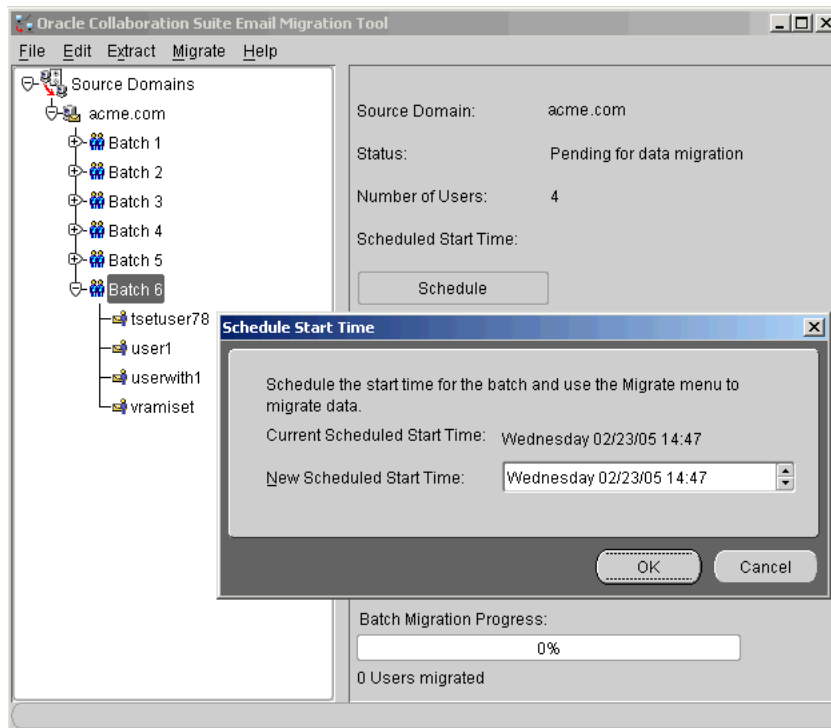
## Scheduling Batches and Migrating User E-mails

To schedule batches for user e-mail migration, expand the domain node to view the batches.

To schedule a start time for batch migration:

1. Select a batch from the directory tree in the Oracle Collaboration Suite Email Migration Tool screen.
2. Click **Schedule** to display the Schedule Start Time dialog as shown in [Figure 3–27](#).

Figure 3–27 Scheduling Batches for Migration



3. In the **New Scheduled Start Time** field, edit the day, date, and time by selecting one element in the string and clicking the **Up** and **Down** arrows to scroll through and select values.

---

**Note:** You can schedule multiple batches to migrate in parallel by scheduling them to start at the same time.

---

4. Click **OK**.

---

**Note:** If a single user in a batch fails, the batch is marked as failed. To reschedule the batch for migration, select the failed batch from the Oracle Collaboration Suite Email Migration Tool screen, edit the **Scheduled Start Time** field, and click **OK**. Once a batch is rescheduled, the users that failed are picked up again for data migration when the scheduled migration time occurs. Users that have been successfully migrated are not re-migrated.

---

## Performing Data Migration

After you complete scheduling batches for migration, you can start data migration. You can migrate data by clicking **Migrate** and then **Migrate User Data** from the Oracle Collaboration Suite Email Migration Tool menu bar. However, the migration of user accounts and messages involves transferring large amounts of data and therefore, takes a long time. Users must be transferred from the source system to the new one in the least possible amount of time to be able to cope if mail is operational while data is moving. Oracle Collaboration Suite Email Migration Tool provides a two-phase migration option that enables repeated iteration of moving data.

This section contains the following:

- [Phase I: Premigrating User Data](#)
- [Phase II: Migrating User Data](#)

### Phase I: Premigrating User Data

All users' messages from the source system are written into the target Oracle Collaboration Suite system. User accounts, however, are not actually populated with messages, nor are their folders created. In this phase all the message bodies are transferred into the Oracle Collaboration Suite system. This is typically done in the background over several days while users continue to use their old accounts.

To start pre-migration, do the following:

1. Ensure that user accounts have been created on the target Oracle Collaboration Suite system.

---

**Note:** Message routing will not take effect during premigration.

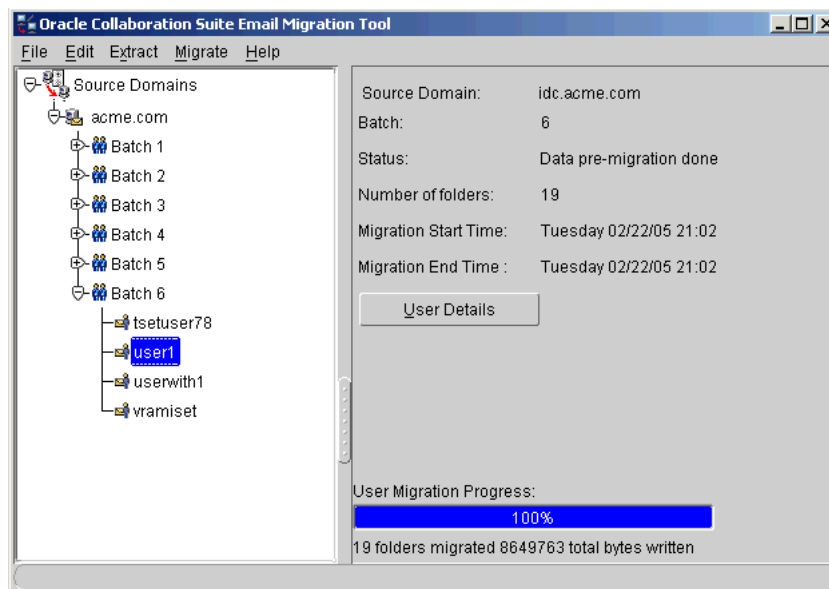
---

**See Also:** ["Step 7: Specifying Mail Migration Options"](#) on page 3-13 for more information about message routing

2. Click **Migrate** and then **Pre-Migrate User Data** from the Oracle Collaboration Suite Email Migration Tool menu bar.

When the premigration of data is complete, the status is displayed as shown in [Figure 3–28](#).

**Figure 3–28 Premigrating Data**



## Phase II: Migrating User Data

In the second phase, Oracle Collaboration Suite Email Migration Tool takes advantage of the message sharing capability of Oracle Collaboration Suite to quickly populate user folders with the messages that were transferred in the first phase.

The second phase, typically, involves only associating migrated e-mail folders with the user accounts, and can be done over a weekend. During the second phase, the following operations are performed:

- Any new messages that users receive between the first and second phases are transferred to the target user accounts
- Any messages that users delete in the interim do not appear in the target user accounts
- Any new folders that users create in the interim are transferred to the target user accounts
- Any folders that users have deleted in the interim do not appear in the target user accounts

---

---

### Note:

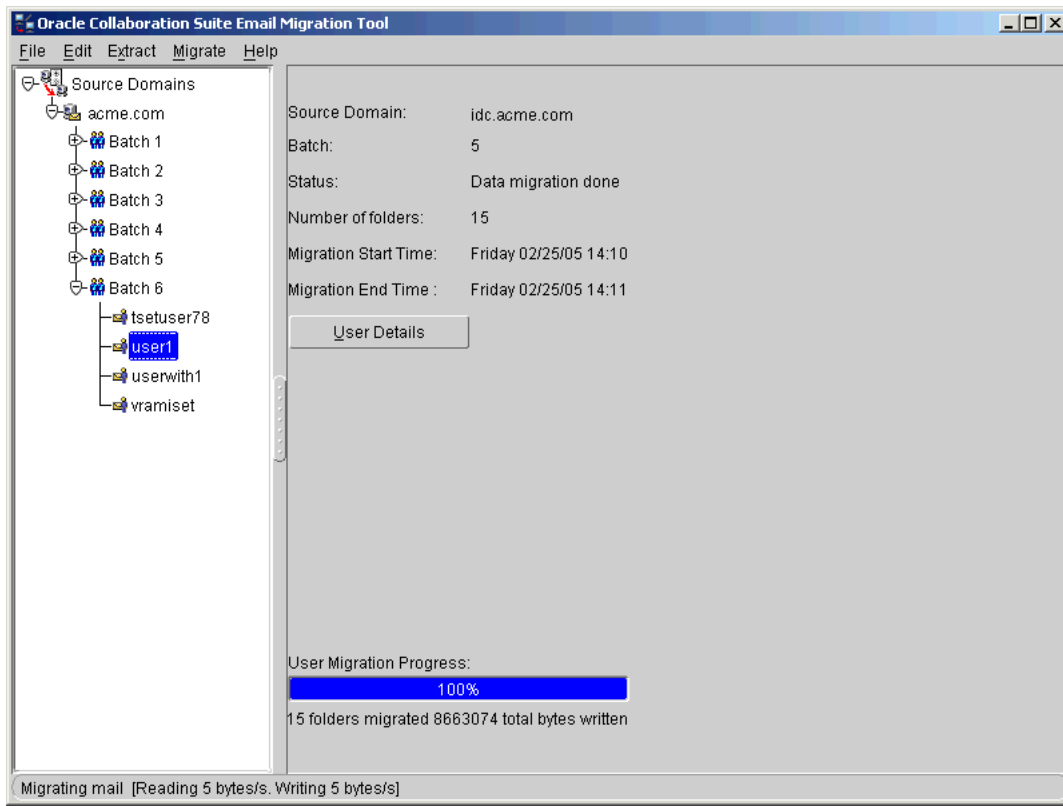
- For best results, the second phase should be performed as quickly as possible after the first phase is complete.
  - When you perform a two-phase migration, all batches are migrated during both phases. It is not possible to selectively migrate specific batches during a two-phase migration.
- 
- 

To start data migration, click **Migrate** and then **Migrate User Data** from the Oracle Collaboration Suite Email Migration Tool menu bar.

Migration begins at the time you selected while scheduling batches. If you start migration at a time later than that which you scheduled, migration begins instantly.

When migration complete, the status is displayed as shown in [Figure 3–29](#).

Figure 3–29 Migrating Data



To cancel migration, click **Migrate** and then **Cancel Migration** from the Oracle Collaboration Suite Email Migration Tool menu bar.

## Task 9: Migrating Shared Folders

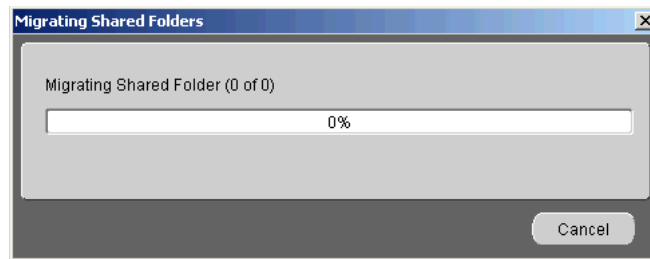
Prior to migrating shared folders, ensure that all user accounts have been provisioned.

To migrate shared folders:

1. Click **Migrate** and then **Shared Folders** from the Oracle Collaboration Suite Email Migration Tool menu bar to create the shared folders on the target e-mail server.
2. Click **OK** when 100% is displayed on the status screen, indicating the migration is complete.

To cancel migration of shared folders, click **Cancel** on the status dialog that displays when you start to migrate the shared folders as shown in [Figure 3–30](#).

**Figure 3–30 Migrating Shared Folders**



---

**Note:** If you cancel migration of shared folders, rollback does not occur and you can safely restart migration. The e-mail objects that were created before you canceled migration are not re-created when migration is recommenced.

---

## Task 10: Migrating Oracle WebMail Address Books

Oracle Collaboration Suite Email Migration Tool can migrate the private address books created by users using their Oracle Email Server 5.2.1 WebMail client. Migration of the Oracle WebMail address book of each user involves migrating both the private aliases and private distribution lists that users have.

---

**Note:** Oracle WebMail Address Book migration is available only for Oracle Email Server to Oracle Collaboration Suite migrations. This migration can only be run for users using the Oracle Email Server 5.2.1 WebMail client.

---

Prior to migrating address books, ensure that all user accounts have been migrated.

To migrate Oracle WebMail address books:

1. Click **Migrate** and then **Address Book** from the Oracle Collaboration Suite Email Migration Tool menu bar. The Address Book Migration Status screen is displayed.
2. Click **OK** when 100% is displayed on the status screen, indicating the migration is complete.

To cancel migration of address books, click **Cancel** on the status dialog that displays when you start to migrate the address books.

---

**Note:** If you cancel migration of address books, rollback does not occur and you can safely restart migration. The address book objects that were created before you canceled migration are not re-created when migration is recommenced. Migration continues from the point where it was canceled.

---

## Modifying Migration Parameters

Any changes you make take effect after you cancel and restart the migration. You cannot modify migration parameters during the migration.

---

**Note:** If two or more instances of the Oracle Collaboration Suite Email Migration Tool are running against the same repository, all instances except one must be shut down before modifications to the migration parameters can proceed.

---

To modify migration parameters:

1. Click **Edit** and then **Migration Parameters** from the Oracle Collaboration Suite Email Migration Tool menu bar. The Modify Migration Parameters screen is displayed as shown in [Figure 3-31](#).

**Figure 3-31** *Modifying Migration Parameters*



2. Modify the parameters according to your selected source system.

---

**Note:** Values for these parameters were originally entered in "[Step 7: Specifying Mail Migration Options](#)" and "[Step 4: Specifying Source LDAP Service Parameters](#)".

---

3. Click **OK**.

## Postmigration Administrator Responsibilities

On the completion of migration, the administrator must perform certain post-migration tasks. The tasks are:

- [Changing the MX Record](#)
- [Verifying Migration](#)
- [Viewing User Status](#)

In addition to the above-mentioned tasks, the administrator needs to enable the antispam check feature.

### Changing the MX Record

You must change the mail exchanger (MX) record to redirect e-mail to the new system.

---

**Note:** Routing is not implemented for Novell GroupWise and you should immediately switch to using Oracle Collaboration Suite after the MX record changes.

---

## Verifying Migration

You can verify the migration of individual user data by using one of several methods of comparison. The administrator can verify the validity of the overall migration and can also provide support to users when users complain of discrepancies in their accounts.

---



---

### Note:

- The verifier can be used only for users who have successfully migrated.
  - The verifier is not available for an MBOX-based migration.
- 
- 

To search and select users to verify:

1. Click **Tools**, and then **Verify New Accounts**. The Verification dialog is displayed as shown in [Figure 3–32](#).

**Figure 3–32** Verifying New Accounts

Use the following options to search and select users to be verified. User accounts with successful data migration can be verified. The verification report is sent to the administrator.

Search:

Category:

Keyword:

Use % as a wildcard

	Username	Batch	Domain
<input checked="" type="checkbox"/>	kilavela	Batch 5	idc.acme.com
<input checked="" type="checkbox"/>	vramiset	Batch 5	idc.acme.com
<input type="checkbox"/>			

Verification Options:

Message Count  Message IDs  Message Header  Entire Message

Administrator e-mail address:

Example: John.Smith@abc.com

2. Select the category of users from the Category list.
3. Specify the keyword in the Keyword field.
4. Click **Search**. The users are listed. You can select any or all users from the table.
5. Select a verification option from one of the following:
  - **Message Count:** Compares the message count in each folder



- **Message IDs:** Compares the SMTP message IDs
- **Message Header:** Compares the message headers
- **Entire Message:** Compares the message bodies of every message

---

---

**Note:** Each option verifies that all folders in an individual user's account have been migrated on the target e-mail system, and compares different message information between the source and target e-mail systems.

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**Note:** If you choose either the **Message Header** or **Entire Message** verification option while migration is proceeding, the migration process slows down considerably.

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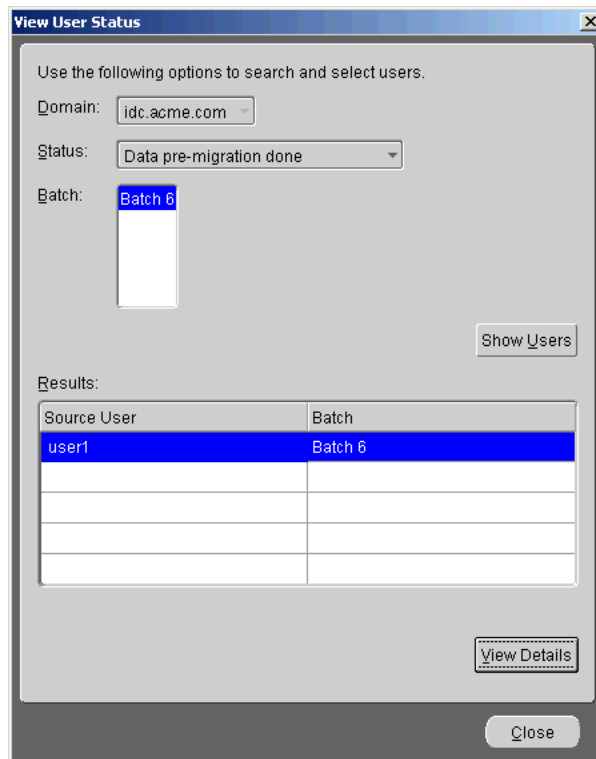
6. Enter the e-mail ID of the administrator to whom the verification report is to be sent in the Administrator Email ID field.
7. Click **Verify Data Migration** to start the verification process.  
To cancel the verification process, click **Cancel** on the Verification dialog.

## Viewing User Status

Oracle Collaboration Suite Email Migration Tool enables you to view users according to their migration status. To view the user status:

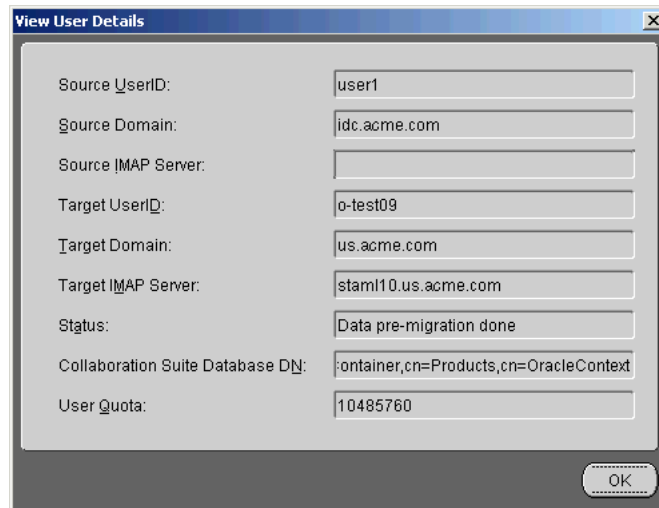
1. Click **Migrate**, and then **View User Status**. The View User Status dialog is displayed as shown in [Figure 3-33](#).

**Figure 3–33 Viewing User Status**



2. Select a domain from the Domain list.
3. Select a status from the Status list.
4. Select a batch from the Batch list.
5. Click **Show Users**. This displays the list of users in the Results section.
6. Select a user from the list and click **View Details**.

The View User Details Screen is displayed as shown in [Figure 3–34](#).

**Figure 3–34 Viewing User Details**

The screenshot shows a dialog box titled "View User Details" with a close button in the top right corner. The dialog contains several fields for user migration details:

Source UserID:	user1
Source Domain:	idc.acme.com
Source IMAP Server:	
Target UserID:	o-test09
Target Domain:	us.acme.com
Target IMAP Server:	stam10.us.acme.com
Status:	Data pre-migration done
Collaboration Suite Database DN:	:ontainer,cn=Products,cn=OracleContext
User Quota:	10485760

An "OK" button is located at the bottom right of the dialog box.



# Part III

---

## Calendar Migration

This part contains information about planning for a calendar migration and performing the migration tasks.

Part III contains the following chapters:

- [Chapter 4, "Calendar Migration Planning"](#)
- [Chapter 5, "Migrating Calendar Data from Microsoft Exchange"](#)
- [Chapter 6, "Migrating Calendar Data from MeetingMaker"](#)
- [Chapter 7, "Migrating Calendar Data from Netscape"](#)
- [Chapter 8, "Migrating Calendar Data Using the iCalendar Representation"](#)



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## Calendar Migration Planning

This chapter provides migration planning information and contains the following sections:

- [Preparing for Migration from Microsoft Exchange](#)
- [Preparing for Migration from MeetingMaker](#)
- [Preparing for Migration from Netscape Calendar](#)
- [Preparing for Migration Using the iCalendar Representation](#)

### Preparing for Migration from Microsoft Exchange

The `exmigrate` utility is used to migrate calendar data from Microsoft Exchange to Oracle Calendar. Oracle recommends using `exmigrate` only with the help of Oracle Support Services or an Oracle certified partner because the utility runs on the command prompt and does not provide a GUI or predefined flow of instructions. Any process involving third-party technology should be handled by a consultant familiar with both the source and target systems as well as the intricacies of `exmigrate` and Oracle Calendar.

#### Premigration Tasks

Before migration, perform the following tasks:

- Determine the data that you need to migrate, calendar data, e-mail, or both.
- Install Oracle Collaboration Suite, if applicable.
- Install an IMAP4 Server, if applicable.
- Install Oracle Connector for Outlook on the computer where `exmigrate` will run.

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**Note:** Use only the version of Oracle Connector for Outlook that is specified in the `exmigrate` README file.

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- Create a single Microsoft Outlook profile with administrator privileges to access the user accounts and user data for both Microsoft Exchange and Oracle Collaboration Suite users. You can use this profile to compare the Microsoft Exchange and postmigration Oracle Collaboration Suite user accounts.
- Ensure that the versions of Oracle Connector for Outlook and `exmigrate` match.
- Ensure that the migration computer is on the same Windows domain as the Microsoft Exchange Server.

- In the file system of the migration computer, create a migration folder that contains:
  - The `exmigrate.exe` and `exmigrateproc.exe` files from the `exmigrate` package.
  - The `ExMigrateUsers.ini`, `ExMigrateConfig.ini` and `ExMigratePasswd.ini` files, which are the templates for the users and configuration options.
- All the Oracle Calendar accounts should be created and set up before the migration starts.
- If the Oracle Collaboration Suite server being migrated has multiple nodes, then to ensure that the attendee status of users on remote nodes is migrated properly, the following entry needs to be appended to the `unison.ini` file of the server:
 

```
[CWS]
noreqsleep=1

[LIMITS]
remotemaxretry=10 { suggested value }
remotewait=2 { suggested value }
{ for busy/slow servers, suggested value is 10 }
```
- The `exmigrate` executables must exist in the Oracle Connector for Outlook directory for the encryption or decryption of the passwords. If the `exmigrate` executables exists in any other directory, then you have to ensure that `ctgt_c.dll` and other libraries on which `ctgt_c.dll` is dependant, are specified in the `PATH` variable.

## Preparing for Migration from MeetingMaker

The `unimmimpsrv` utility is used to migrate data from MeetingMaker to Oracle Calendar. The utility uses the `unimmimpsrv.ini` file to determine the MeetingMaker files to be imported and the Oracle Calendar nodes that receive the data. However, the utility does not work with the Oracle Calendar servers that use directory servers.

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**Note:** Only trained Oracle personnel should use `unimmimpsrv`. Data loss or corruption resulting from the use of this utility by unauthorized persons is not the responsibility of Oracle and support for such loss is not covered under the standard support contract.

---



---

Before performing the migration from MeetingMaker, consider the following facts:

- A single MeetingMaker server cannot be split among two or more Oracle Calendar nodes, but any number of MeetingMaker servers can be imported into a single Oracle Calendar node.
- The MeetingMaker servers that are connected to separate hubs should be imported in separate operations.
- All the MeetingMaker servers attached to the same hub should be imported in a single operation.
- If only a subset of the MeetingMaker servers attached to a hub are imported, the following conditions apply:



- Oracle Calendar accounts are created for all users in all the MeetingMaker servers attached to the hub, within and outside the targeted subset.
- Agenda entries are created for users outside the targeted subset only if these entries were proposed by a user in the targeted subset. The `uniuser` utility may subsequently be used to delete those users who are outside the targeted subset, from the Oracle Calendar database.

---

**Note:** The current version of `unimmimpsrv` works only on Oracle Calendar Server version 10.1.1.

---

## Planning Calendar Server Deployment

In addition to the above-mentioned points, plan your Calendar server deployment carefully. Install the standalone internal Calendar server according to your Oracle Collaboration Suite deployment plan. For example, if you plan for three Calendar nodes in Oracle Collaboration Suite, install the Calendar servers in internal configuration accordingly. It is strongly recommended to use a Domain Naming System (DNS) alias instead of the real hostname of the computer. Finally, connect the Calendar nodes together.

## Transferable and Non-Transferable Data

During migration, certain data is not transferred to the destination Oracle Calendar node. You need to plan the migration so that the non-transferable data is retained after migration.

The following table summarizes the data that is transferable from MeetingMaker to Oracle Calendar:

**Table 4–1 Data Mapping for the `unimmimpsrv` Utility**

MeetingMaker Data Type	Data	Oracle Calendar Mapping
Administrative Data		
	Server Name	Node alias. It must be set manually during node creation.
	Administrative Rights	Administration rights must be set manually
	MeetingMaker Holidays	Oracle Calendar Holidays (Convert yes/no)
	MeetingMaker Public Groups & associated sub-groups	Oracle Calendar Public Groups
	Time Zones	Oracle Calendar node time zone, which is configured in the <code>unimmimpsrv.ini</code> file
User Data		
	First Name, Last Name	X.400 given name, X.400 surname, Password is set to NULL
	Sign-in Name	UID
	Password	Configured in <code>unimmimpsrv.ini</code> (Convert yes/no)

**Table 4–1 (Cont.) Data Mapping for the unimmimpsrv Utility**

<b>MeetingMaker Data Type</b>	<b>Data</b>	<b>Oracle Calendar Mapping</b>
	Title, Phone, Extension, Fax	Job title, phone number, and extension
	Server Name	Stored in Organizational Unit 1 field of X.400 address
	Proxies	Calendar designates. All proxies regardless of read/write access are granted only viewing rights to the grantor's Oracle Calendar agenda
	User-defined Groups	Private Oracle Calendar groups owned by user
	User Activities	Oracle Calendar meeting with no invitees
	User Meetings	Oracle Calendar meeting with same invitees
	User Banners	Oracle Calendar note on each day that banner covers
	User To Do's	Oracle Calendar tasks
<b>Resource Data</b>		
	First Name, Last Name	First and last name become new Oracle Calendar resource name The resource number is assigned by the unimmimpsrv utility.
<b>MeetingMaker Activities and Meetings Data</b>		
	Title, Location, Time, Date, Duration and Repetitions	Oracle Calendar Title, Location, Time, Date, Duration and Repetitions
	Information	Invitees and Status
<b>MeetingMaker Banners</b>		
	Title, Location, Date, and Repetitions	Oracle Calendar Title, Location, Date, and Repetitions
	Information	Invitees and Status
<b>MeetingMaker To Do's Data</b>		
	Title & Date	Oracle Calendar title and date
	Invitees	To Do's become Oracle Calendar tasks, so that a task is created for each invitee.

The following table lists the data that is not transferred after migrating from MeetingMaker to Oracle Calendar:

**Table 4–2 Non-transferable Data**

Type of Data	Data	Description
Administrative Data	MeetingMaker administrative rights	These rights must be set manually through Oracle Calendar Server administrative tools.
User Data	Room, Information, City, Zip Code, and Country	Some of these values are stored in the X.400_Address structure of UNIAPI_ITEM, but only administrators can see these values. The unimmimpsrv utility supports this data, but Oracle Calendar does not.
	User-defined labels for meetings and activities	
	User-defined to do priority levels	
	User work days and hours	
	Default notification and reminder preferences	This data is not exported by the MeetingMaker server.
	User-defined contact list	This data is not imported as invitees of meetings, activities, and to do's nor as group members.
Resource Data	Lost user data along with phone, extension, fax number, and title	The unimmimpsrv utility supports this data, but Oracle Calendar does not.
	Resource-defined groups	The unimmimpsrv utility supports this data, but Oracle Calendar does not.
	Resource activities	Oracle Calendar resources cannot create events. The unimmimpsrv utility supports this data, but Oracle Calendar does not.
MeetingMaker Activities, Banners, and Meetings Data	Publishable	
	Flexible	
	Reminders	This data is not exported from the MeetingMaker server.
	Importance Level	
	Label	
	Invitee Comments	
	Meetings and activities that repeat after a specific period from the end of the month	This data does not have an Oracle Calendar equivalent.
	Meeting with start dates before the year 1991	

**Table 4–2 (Cont.) Non-transferable Data**

Type of Data	Data	Description
MeetingMaker To Do's Data	Instances of an event exceeding 60	The start date can be limited when exporting from MeetingMaker or the <code>maxrecur</code> parameter of the <code>unison.ini</code> file can be modified.
	Priority level, Private and Publishable	
	Invitee comments	
	Done/Not Done	
	Owner control	An independent Oracle task is created for each invitee. Only the task details state the creator's name and list of all invitees.

## Preparing for Migration from Netscape Calendar

Migration from Netscape Calendar to Oracle Calendar has to be done through an intermediate migration to CorporateTime. This is because a direct migration from Netscape to Oracle Calendar is not possible.

## Preparing for Migration Using the iCalendar Representation

Although iCalendar standard supports several Calendar components, such as `VEVENT`, `VCARD`, and `VTOD`, `uniical` only supports `VEVENTs`. Calendar components other than `VEVENT` must be removed from the iCalendar data before passing it to `uniical`. You can use `VEVENTs` to represent meetings, day events, daily notes and holidays. To distinguish between the four events mentioned in the preceding sentence, you should use the `X-ORACLE-EVENTTYPE` property with the following values:

- `APPOINTMENT` (default)
- `DAILY NOTE`
- `DAY EVENT`
- `HOLIDAY`

Refer to ["The uniical Utility"](#) in Chapter 8, ["Migrating Calendar Data Using the iCalendar Representation"](#) for more information on `uniical`.

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## Migrating Calendar Data from Microsoft Exchange

This chapter provides the steps to migrate data from a Microsoft Exchange Server to an Oracle Calendar Server/IMAP4 Server pair using `ExMigrate`. This utility is fairly flexible, but it has many options that need to be set carefully depending on specific requirements. The technical staff performing the migration needs to specify the correct information in the configuration files to migrate from Microsoft Exchange to Oracle Calendar successfully.

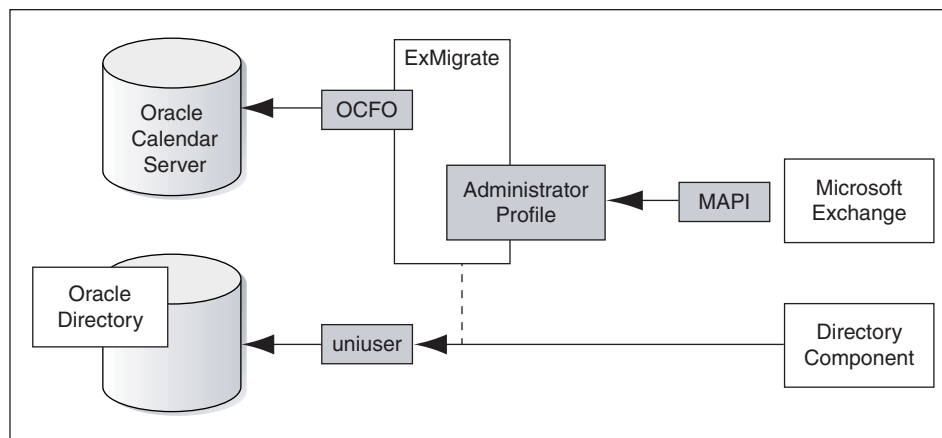
The chapter contains the following sections:

- [How ExMigrate Works?](#)
- [System Requirements](#)
- [ExMigrate Configuration Values](#)
- [Step-by-Step Migration](#)

### How ExMigrate Works?

[Figure 5-1](#) illustrates the migration process using `ExMigrate`.

**Figure 5-1** *Calendar Migration from Microsoft Exchange*



As shown in [Figure 5-1](#), `ExMigrate` uses the technology of Oracle Connector for Outlook to connect a Microsoft Exchange MAPI data source with the Oracle Calendar objects. It extracts these objects from Microsoft Exchange using the native MAPI

libraries and reconstructs them in the Oracle Calendar Server. To create Oracle Calendar entries, it is feasible to perform the migration for e-mail and Oracle Calendar simultaneously. The associated directory components are either managed by Oracle Collaboration Suite Email Migration Tool, or through other Calendar utilities such as `uniuser`.

**See Also:** "Calendar Server Utilities" in Chapter 6 of *Oracle Calendar Reference Manual* for more information on `uniuser`.

## System Requirements

`ExMigrate` cannot run on a computer where Microsoft Exchange is installed. The utility needs to run on an intermediate computer, or client. The system requirements for running `ExMigrate` on the intermediate computer are:

- Microsoft Windows 2000, XP, or higher as the operating system
- WinZip for decompression
- Same domain as the Microsoft Exchange server
- Microsoft Outlook 2000, XP, or 2003
- Oracle Connector for Outlook version 9.0.4.2.1 on the client machine only
- Administrative rights on the Microsoft Exchange server
- All Microsoft Exchange accounts that need to be migrated should be listed in the [MasterList] section of the `ExMigrate users.ini` file. This section lists all the Microsoft Exchange accounts that are migrated to Oracle Collaboration Suite. The section should list all the users you wish to migrate if you plan on maintaining links.
- Encrypted password file containing the `sysop` users and passwords of all the nodes, including Oracle Collaboration Suite and IMAP4 passwords, where applicable.
- `ExMigrate` should be unzipped at the following location:

`C:/Program Files/Oracle/Outlook Connector`

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**Note:** Microsoft Outlook should not be open when `ExMigrate` is run, otherwise the `Mapi32.dll` is blocked and cannot be accessed by `ExMigrate`. Using Task Manager, check to see that `mapi32.exe` and `outlook.exe` are not running.

In the Microsoft Windows domain, you need to be logged on as the Microsoft Exchange administrator, otherwise, you will be prompted for a password when you run `ExMigrate`.

Although, you can migrate e-mail and calendar data simultaneously, it is advised to commence Oracle Calendar migration after completing e-mail migration.

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## ExMigrate Configuration Values

The `ExMigrate` package comes in a zipped format called `exmigrate.zip` and it contains the configuration file, `ExMigrateConfig.ini`, the users file, `ExMigrateUsers.ini`, and a password file, `ExMigratePasswd.ini`. These files

have various sections that need to be configured correctly for ExMigrate to function properly. Table 5–1 lists contents of the ExMigrateConfig.ini.

**Table 5–1 ExMigrateConfig.ini**

Section	Name	Values	Optional	Dependency	Description
ExchangeServer	Organization	(string) like Oracle	No	-	A collection of servers, grouped into sites, that are linked together to provide workgroup connectivity, information, and messaging services. The organization is the largest administrative unit in a Microsoft Exchange Server system. It encompasses all the Microsoft Exchange Server computers in a company's messaging infrastructure, (according to MSDN)
ExchangeServer	Domain	(string) like Vega	No	-	One or more Microsoft Exchange servers that provide services to a set of users. Sites can be centrally managed and can span physical locations (according to MSDN)
ExchangeServer	Server	(string) like PC-116	No	-	Name of the Exchange server
ExchangeServer	Exchange Administrator	(string) user name like david	No	-	User that has administrative privileges on the Exchange server. The user logging on to the client computer must also have administrative privileges on the Exchange server to run the ExMigrate utility.
OracleCalendar	Migrate	(bool) 1 = proceed with the migration to Oracle Calendar	Yes (default = 1)	-	Setting used to enable or disable the copying of data in Oracle Calendar. The user may be interested of migrating mail only (see IMAP4 settings) or Oracle Calendar data only.
OracleCalendar	DefaultServer	(string) like server1	No	Migrate = 1	The default name of the Oracle Collaboration Suite server for the migrated accounts.
OracleCalendar	DefaultNodeID	(string) like 10000	No	Migrate = 1	The default node ID for the migrated accounts. Set /N in the user mapping information to override the default Oracle Calendar node ID.
OracleCalendar	Port	(number) like 0	Yes (default = 5730)	Migrate = 1	The Oracle Calendar port
OracleCalendar	AllNodes	(Semicolon separated numbers) like 10000;10001	No	Migrate = 1 Node#	This setting contains the list of all the nodes (including the default one) on which the migration will be done. The information about the servers should be put in the nodes attributes
OracleCalendar	Node# like 10000	(string) like server1	No	Migrate = 1 Listed in AllNodes	You may have several <i>node#</i> settings. Each of them contains a server name and (including the default one). This information is used by the utility to maintain availability status of meetings.
OracleCalendar	MigrateCalendar MigrateJournal MigrateContacts MigrateTasks MigrateNotes	(bool) 1 = migrate the type folders	Yes (default = 1)	Migrate = 1	It is possible to exclude a selection of Oracle Calendar data, for example, set <i>MigrateJournal</i> to 0 if you are not planning to migrate Journal (special folder).
OracleCalendar	MigrateOnly MainFolders	(bool) 1 = migrate only main folders	Yes (default = 0)	Migrate = 1	A main folder is a folder at root level and that is not created by the end user. Setting this option to 1 will migrate only the special predefined non-mail root level folders (Calendar, Contacts, Journal, Notes, Tasks)

**Table 5–1 (Cont.) ExMigrateConfig.ini**

Section	Name	Values	Optional	Dependency	Description
IMAP4	Migrate	(bool) 1 = migrate mail folders	Yes (default=1)	-	Mail folders get migrated with this option set to 1 (Inbox, Sent Items, Deleted Items, and user created mail folders)
IMAP4	Server	(string) like earth	No	Migrate = 1	The name of IMAP4 mail server for migrated users
IMAP4	Port	(number) like 1143	Yes (default = 143)	Migrate = 1	The port used by the selected IMAP4 mail server
UsersFiles	MigrationSubset	(path) like ..\ExMigrateConfig\ExMigrateUsers.ini	No	-	The filename containing the user mapping. It can be the same file as the <i>ExMigrateConfig.ini</i> with two extra sections [Settings] and [MigrationSubset]. A valid path would be required, if the file does not reside in the module directory. A check is made for the file existence and the permissions. The program will not continue if the check is failed.
UsersFiles	MasterList	(path) like ..\config\ExMigrateUsers.ini	No	-	The filename containing the list of all user mapping that will be migrated to Oracle Calendar. It can be the same file as the <i>ExMigrateConfig.ini</i> with one extra section [MasterList]. A valid path would be required, if the file does not reside in the module directory. A check is made for the file existence and the permissions. The program will not continue if the check is failed.
UsersFiles	SysOpPassword File	(path) like ..\config\ExMigratePasswd.ini	No	[OracleCalendar] AllNodes	The filename containing list of all nodes and their encrypted sysop passwords. It can be the same file as the <i>config.ini</i> with one more section [SysOpPasswords]. A valid path would be required, if the file does not reside in the module directory. A check is made for the file existence and its permissions. The program will not continue if the check is failed.
UsersFiles	UsersPassword File	(path) like ..\config\ExMigratePasswd.ini	No	Exchange username specified in <i>ExMigrateUsers.ini</i> [MigrationSubset] or [MasterList], or both	A file name containing list of all Exchange usernames as typed in in <i>ExMigrateUsers.ini</i> /E and their encrypted password(s) separated by a colon (:). password comes before the IMAP4 password. If you are migrating both Calendar and E-mail and the user does not have an Oracle Collaboration Suite password, the IMAP4 password must be preceded by colon (:). The file can be the same file as the <i>ExMigrateConfig.ini</i> with one more section [UsersPasswords]. Valid path would be required, if the file did not reside in the module directory. A check is made for the file existence and its permissions. The program will not continue if the check is failed.
Options	CopyMessages	(bool) 1 means that messages are copied	Yes (default = 1)	-	If this value is set to 0, only the folder hierarchy will be created. No messages will be copied over. This field can be used to check the new folder hierarchy on Oracle Calendar server.



Table 5–1 (Cont.) ExMigrateConfig.ini

Section	Name	Values	Optional	Dependency	Description
Options	MigrateDeletedItems	(bool) 1 means that data inside Deleted Items is retained	Yes (default = 0)	[IMAP4]Migrate=1	If this field is set to 1, all the items copied to the Deleted Items folder will be copied and converted to the mail message type.
Options	MaintainLinks	(bool) 1 means the links are maintained	Yes (default = 0)	Correct version of Oracle Calendar	Ensures data (such as meetings on exchange server) will be preserved on Oracle Calendar and the status of the meeting attendees are maintained.
Options	CalendarTimeRange	(number of months (n)) like 12	Yes (default = no time frame restriction is applied)	[OracleCalendar] Migrate = 1[OracleCalendar] MigrateCalendar = 1	It will copy meetings up to <i>n</i> months in the past. This restriction will not be applied to recurrences or meetings in the future.
Options	KeepOrphanMeetings	bool (1 means that orphan meetings are preserved)	Yes (default = orphan meetings are preserved)	Properly filled MasterList (else too many private copies will be generated)	A private copy of meetings will be saved for every attendee of a meeting that has an organizer that is not part of the migration (not in the MasterList).
Options	GenerateMessageStatus	bool (1 means that message status are generated)	Yes (default = 1 message status are generated)	[Options] EraseStatusOnCompletion	The file ExMigrateStatus.ini will temporarily store information about messages that are processed (succeeded, failed, or unexpectedly failed).
Options	EraseStatusOnCompletion	bool (1 status messages are erased when the user is completed)	bool (1 status messages are erased when the user is completed)	[Options] GenerateMessageStatus	Once a particular user is fully migrated and the /D=1 flag is set, all status messages are erased in the ExMigrateStatus.ini.
Options	AutoRestart	bool (1 ExMigrate will try to recover from some failures)	Yes (default = 1, ExMigrate tries to recover)	[Options] MaxRestart [Options] GenerateMessageStatus	ExMigrate will reset the MAPI context and restart the migration of the current user. Ensure that GenerateMessageStatus is set to avoid duplication of messages in Oracle Collaboration Suite.
Options	MaxRestart	integer (0 means no maximum, <i>n</i> > 0 means that ExMigrate will try to recover a maximum of <i>n</i> times before it stops)	Yes (default = 0, no maximum)	[Options] AutoRestart [Options] GenerateMessageStatus	ExMigrate will reset the MAPI context and restart the migration of the current user up to <i>n</i> times. Ensure that GenerateMessageStatus is set to avoid duplication of messages in Oracle Collaboration Suite.

Table 5–2 lists the contents of ExMigrateUsers.ini.

**Table 5–2** *ExMigrateUsers.ini*

Section	Name	Values	Optional	Dependency	Description
MigrationSubset	User Information	(string) e.g /E=david/M=david/S=Dan/G=Davi/I=/U=david/	No	[OracleCalendar] NodeID [OracleCalendar] Server are taken as default if not /N or /C, or both are not supplied.	The user information is divided into 11 parts described later. Note that all users mentioned here should also be listed in the [MasterList] section. D=Done flag, automatically added, but can be added manually to bypass users (1 if user processed, 2 if user is skipped) E=Exchange User Name M=MAP4 User Name S=Last Name (optional) G=Given Name (optional) I=Middle Initial (optional) U=Oracle Calendar User Name or UID (recommended) N=Oracle Calendar Node ID (optional) C=Oracle Calendar Server (optional)
MasterList	User Information	(string) e.g /E=david/M=david/S=Dan/G=Davi/I=/U=david/	No	[OracleCalendar] NodeID [OracleCalendar] Server are taken as default if not /N or /C, or both are not supplied.	This section must contain all the users who are to be migrated to Oracle Calendar servers. However migrating all the users may take several sessions. Copy the users listed in the [MigrationSubset] to migrate them in this session. D=Done flag, automatically added, but can be added manually to bypass users (1 if user processed, 2 if user is skipped) E=Exchange User Name M=MAP4 User Name S=Last Name (optional) G=Given Name (optional) I=Middle Initial (optional) U=Oracle Calendar User Name or UID (recommended) N=Oracle Calendar Node ID (optional) C=Oracle Calendar Server (optional)

Table 5–3 lists the contents of ExMigratePassword.ini.

**Table 5–3** *ExMigratePassword.ini*

Section	Name	Values	Optional	Dependency	Description
SysOpPasswords	SysOp Password Information	(string) e.g 1000={STD}RyJ QhLMrgECi+v HUNj2Wodde vSui9/srKYeT MQgzcYDQ3r CJR8snWw==	Yes	[OracleCalendar] AllNodes	The Node ID and its encrypted SysOp Password, each for all nodes specified in <i>ExMigrateConfig.ini</i> [OracleCalendar]AllNodes section.
UsersPasswords	User Password Information	(string) e.g david={STD}L d6KssBxV59tx 8SaD2KLmzY3 +KvBzDCtjfcF HrlckKjj/vFU wguR5Q==:S TD)RyJQhLMr gECi+vHUNj2 WoddevSui9/s rKYeTMQgzcY DQ3rCJR8snW w==	Yes	Exchange username specified in <i>ExMigrateUser s.ini</i> [MigrationSubset ] or [MasterList], or both	A file name containing list of all Exchange usernames as typed in <i>ExMigrateUsers.ini</i> /E and their encrypted password(s) separated by a colon (:). Oracle Collaboration Suite password comes before the IMAP4 password. If you are migrating both Calendar and E-mail and the user does not have an Oracle Collaboration Suite password, the IMAP4 password must be preceded by colon (:).

## Step-by-Step Migration

The migration from Microsoft Exchange to Oracle Calendar involves several days and is performed in stages. The following sections describe each stage of migration and the steps performed in each stage:

- [Connecting to Microsoft Exchange](#)
- [Setting Up the Configuration Files](#)
- [Creating Oracle Calendar Users](#)
- [Creating IMAP4 Users](#)
- [Running the Utility](#)
- [Evaluating the Results](#)

### Connecting to Microsoft Exchange

To connect to the Microsoft Exchange server:

1. Find or create a Microsoft Exchange Administrator who has a mailbox, and administrator rights, because a user administrator does not have the administrative privileges, by default.
2. Obtain the Microsoft Exchange information that you need to enter in the [ExchangeServer] section of the *config.ini* file. To get the information:
  - a. Create or use an existing profile, such as the *hint* profile, which has Microsoft Exchange Message Service configured and administrative rights to the Microsoft Exchange server.
  - b. Use the *hint* profile to gather information about the Microsoft Exchange server. For example, enter `exmigrate.exe /hint hint profile name`.
  - c. Determine the default mailbox domain. The default mailbox domain is the name of the organizational unit, or the value of *ou*. This provides the location of other users and can have the same value as *Domain*. On Microsoft Exchange 2000, the default value for the *Domain (/ou=)* is `First`

Administrative Group, but any other value can be used during installation.

3. Obtain the list of users.
    - Run `exmigrate.exe` with the `/m` parameter to print the Microsoft Exchange mailboxes. This option is, however, available only with Microsoft Exchange 5.5. For Microsoft Outlook 2002, or Microsoft Outlook XP, ensure that you have Microsoft Office XP Service Pack 2 installed on your computer.
- 
- Note:** The `[ExchangeServer]` section in the `config.ini` file must be completed in order to extract user information.
- 
- From Sys Admin, remove duplicate and inactive users along with the users who will not be migrated.
4. Copy `ExMigrate` to the Oracle Connector for Outlook home directory (recommended) or ensure that the Oracle Connector for Outlook home directory is an environment `PATH` variable.

A valid connection with Microsoft Exchange should now be established.

## Setting Up the Configuration Files

You need to set up the configuration files with the values mentioned in the "[ExMigrate Configuration Values](#)" section.

### Setting Up `ExMigrateConfig.ini`

To populate `ExMigrateConfig.ini`, you need to set up an Exchange profile with administrator rights on the migration host computer. For example, you need to create `exadminprofile` on migration host as the Exchange profile name. Using this profile, you can run the following command to retrieve Exchange server information:

```
exmigrate /hint exadminprofile
```

The preceding command returns the following:

```
[ExchangeServer]
Organization=ACME
Domain=CA
Server=EXCHANGE
ExchangeAdmin=exadminprofile
DefaultExchangeMailboxDomain=EXCHANGE_DOMAIN
```

For migrating calendar data from an Exchange server to Oracle Calendar, you need to populate the `[OracleCalendar]` section of the `ExMigrateConfig.ini` file with correct values. For example, you need to migrate the entire calendar data (along with tasks, journals, contacts, and notes) from an Exchange server to an Oracle Calendar server, which has the following setup:

```
Calendar Server Host : calendar.ca.acme.com
Calendar Server NodeID : 1
Calendar Sever Port number : 5730
```

For the preceding Calendar setup, the `[OracleCalendar]` section of the `ExMigrateConfig.ini` file should have the following entries:

```
Migrate=1
DefaultServer=calendar.ca.acme.com
```

```

DefaultNodeID=1
AllNodes=1
1=calendar.ca.acme.com
Port=5730
MigrateCalendar=1
MigrateJournal=1
MigrateNotes=1
MigrateContacts=1
MigrateTasks=1
MigrateOnlyMainFolders=1

```

Leave the [IMAP] section blank or set all the keys to 0, because you do not need to migrate e-mail using ExMigrate. For [UserFiles], provide absolute path names for the ExMigrateUsers.ini and ExMigratePassword.ini files. In the case of [Options], provide the typical values. However, MaintainLinks=1, CopyMessages=1 are very important.

Considering the preceding example, the ExMigrateConfig.ini file should look like the following:

```

[ExchangeServer]
Organization=ACME
Domain=CA
Server=EXCHANGE
ExchangeAdmin=exadminprofile
DefaultExchangeMailboxDomain=EXCHANGE_DOMAIN

[OracleCalendar]
Migrate=1
DefaultServer=calendar.ca.acme.com
DefaultNodeID=1
AllNodes=1
1=calendar.ca.acme.com
Port=5730
MigrateCalendar=1
MigrateJournal=1
MigrateNotes=1
MigrateContacts=1
MigrateTasks=1
MigrateOnlyMainFolders=1

[IMAP4]
Migrate=0
Server=0
Port=0

[UsersFiles]
MasterList=C:\Program Files\Oracle\Outlook Connector\ExMigrateUsers.ini
MigrationSubset=C:\Program Files\Oracle\Outlook Connector\ExMigrateUsers.ini
UsersPasswordFile=C:\Program Files\Oracle\Outlook Connector\ExMigratePasswd.ini
SysOpPasswordFile=C:\Program Files\Oracle\Outlook Connector\ExMigratePasswd.ini

[Options]
MigrateDeletedItems=0
MaintainLinks=1
CalendarTimeRange=12
CopyMessages=1
KeepOrphanMeetings=1
GenerateMessageStatus=1
EraseStatusOnCompletion=1
AutoRestart=1

```

```
MaxRestart=0
```

## Setting Up ExMigrateUsers.ini

To set up the `ExMigrateUsers.ini` file, you need to perform the following steps:

1. Run the following command to list all Exchange users:

```
exmigrate /m /c ExMigrateConfig.ini
```

The preceding code lists all the Exchange users in the following format:

```
/E=ExchangeUser1/U=/X=Alias: exu1/X=Display Name: test1/M=/S=/G=/I=/A=/N=/C=
/E=ExchangeUser2/U=/X=Alias: exu2/X=Display Name: test2/M=/S=/G=/I=/A=/N=/C=
/E=ExchangeUser3/U=/X=Alias: exu3/X=Display Name: test3/M=/S=/G=/I=/A=/N=/C=
/E=ExchangeUser4/U=/X=Alias: exu4/X=Display Name: test4/M=/S=/G=/I=/A=/N=/C=
/E=ExchangeUser5/U=/X=Alias: exu5/X=Display Name: test5/M=/S=/G=/I=/A=/N=/C=
```

2. For each user to be migrated from Exchange to Oracle Collaboration Suite, copy the `/E=ExchangeUser1/U=/X=Alias` part from the preceding output and paste it in the `[MasterList]` section of the `ExMigrateUsers.ini` file, and replace the `/U=/X=Alias` with the corresponding Oracle Collaboration Suite user ID or name. The `[MasterList]` section should look similar to the following:

```
[MasterList]
/E=ExchangeUser1/U=OCSUser1
/E=ExchangeUser2/U=OCSUser2
/E=ExchangeUser3/U=OCSUser3
/E=ExchangeUser4/U=OCSUser4
/E=ExchangeUser5/U=OCSUser5
```

3. Select all the user entries that will be migrated in the current instance of migration run from the `[MasterList]` section and paste them in the `[MigrationSubset]` section of the `ExMigrateUsers.ini` file. The `[MigrationSubset]` section should look similar to the following:

```
[MigrationSubset]
/E=ExchangeUser1/U=OCSUser1
/E=ExchangeUser2/U=OCSUser2
```

So, the final `ExMigrateUsers.ini` file should look similar to the following:

```
[MigrationSubset]
/E=ExchangeUser1/U=OCSUser1
/E=ExchangeUser2/U=OCSUser2
[MasterList]
/E=ExchangeUser1/U=OCSUser1
/E=ExchangeUser2/U=OCSUser2
/E=ExchangeUser3/U=OCSUser3
/E=ExchangeUser4/U=OCSUser4
/E=ExchangeUser5/U=OCSUser5
```

## Setting Up ExMigratePassword.ini

You need to populate both the `[UsersPasswords]` and `[SysOpPasswords]` sections with correct values.

### Populating [UsersPasswords]

For each Exchange user in the `[MigrationSubset]` section in `ExMigrateUsers.ini`, run the following command:

```
exmigrate /e Exchange_User_Name plaintext_cleartext_ocs_password_for_matching_
exchange_user
```

The preceding command retrieves the password for the specified user.

Assuming the following is the content of your `ExMigrateUsers.ini` file:

```
[MigrationSubset]
/E=ExchangeUser1/M=IMAP4User1/U=OCSUser1
[MasterList]
/E=ExchangeUser1/M=IMAP4User1/U=OCSUser1
/E=ExchangeUser2/M=IMAP4User2/U=OCSUser2
```

In this case, you need to generate only one entry in `ExMigratePassword.ini` for `ExchangeUser1`, because the `[MigrationSubset]` section contains only one user. Use the following command to retrieve the password for `ExchangeUser1`:

```
exmigrate /e ExchangeUser1 plain text OCS password
```

The preceding command returns an output similar to:

```
ExchangeUser1={STD}hIjMCzTOXZsk+W9LP0Cee/1PSUgatzI3j8umLeuexdQbHLb9nRCxRg==
```

Append the output to the `[UsersPasswords]` section of the `ExMigratePassword.ini` file as the following:

```
[UsersPasswords]
ExchangeUser1={STD}hIjMCzTOXZsk+W9LP0Cee/1PSUgatzI3j8umLeuexdQbHLb9nRCxRg==
```

You need to repeat the entire procedure for each user listed in the `[MigrationSubset]` section of the `ExMigrateUsers.ini` file.

### Populating [SysOpPasswords]

For each Calendar node defined in `ExMigrateConfig.ini`, you need to run the following command:

```
exmigrate /e OCS_NODEID plaintext_cleartext_ocs_Calendar_sysop_password_for_
matching_nodeid
```

The preceding command retrieves the password for the specified NodeID.

Assuming the following is the content of the `[OracleCalendar]` section of your `ExMigrateconfig.ini` file:

```
[OracleCalendar]
DefaultServer=calendar.ca.acme.com
DefaultNodeID=1
AllNodes=1
1=calendar.ca.acme.com
```

In this case, you need to generate only one entry in `ExMigratePassword.ini` for `NodeID 1`. Use the following command to retrieve the password for `NodeID 1`:

```
exmigrate /e 1 test1
```

The preceding command returns an output similar to:

```
1={STD}aWc7ZtR6sE64M1ElizukWmiEuvPVaUXK2LPJ9Jzk+ThXi145pGmw7w==
```

Append the output to the `[SysOpPasswords]` section of the `ExMigratePassword.ini` file as the following:

```
[SysOpPasswords]
```

```
1={STD}aWc7ZtR6sE64M1ElizukWmiEuvPVaUXK2LPJ9JZk+ThXi145pGmw7w==
```

You need to repeat the entire procedure for each NodeID listed in the [OracleCalendar] section of the ExMigrateConfig.ini file.

## Creating Oracle Calendar Users

Creating Oracle Calendar users is an optional task. To create the Oracle Calendar users:

1. Set the migration option in the [OracleCalendar] section of the config.ini file. If you need to migrate calendar information, set Migrate=1; otherwise set Migrate=0.
2. Fill in the rest of the [OracleCalendar] section.
3. Use the list of Microsoft Exchange users to create the [MasterList] section in the users.ini file. Create this list very carefully. Errors in this list can have a negative impact on migration. Also, if the values in the section are misaligned, the data can end up in the wrong accounts. See the ["ExMigrate Configuration Values"](#) section for all the settings in [MasterList].
4. Copy and paste a part of (or the entire) [MasterList] section into the [MigrationSubset] section. Initially, you can try migrating only one or two users. It is quite possible that you will be required to clear the account and start over.
5. Create the users in the Oracle Calendar Server with utilities such as uniuser.

**See Also:** "Calendar Server Utilities" in Chapter 6 of *Oracle Calendar Reference Manual* for more information on uniuser.

6. Create Sysop and users' encrypted passwords file by running ExMigrate with /E option. This switch takes one node ID and the corresponding Sysop password or one Microsoft Exchange user name and the corresponding Oracle Collaboration Suite and IMAP4 password to encrypt. For example, to create the Sysop password for a node, use the following command:

```
Exmigrate.exe /E <node id> <sysoppassword>
```

To create Oracle Collaboration Suite and IMAP4 password, use the following command:

```
Exmigrate.exe /E <exchangeUsername> <OCS passwd> <IMAP4 passwd>
```

7. Users that you eventually plan to migrate should be created now, otherwise links for the meetings to which these users are invited will not be maintained. So, it is better to create users at this stage.

## Creating IMAP4 Users

Like Oracle Calendar users, creating IMAP4 users is also optional. To create the IMAP4 users:

1. Set the migration option in the [IMAP4] section of the config.ini file. If you want to migrate mail info, set Migrate=1; otherwise set Migrate=0.
2. Fill in the rest of the [IMAP4] section. Be careful to choose a valid value for the FailSafeTargetFolder key—leaving it blank works on many mail servers.



The value will be used only if the program fails to create a folder, but it is important to know where folders might be created.

3. Create the users in the IMAP4 server.

## Running the Utility

Before running `ExMigrate`, consider the following facts:

- The utility can take several hours or days to run. The length of time needed depends on the number of users, the volume of their mail and calendar information, the log level, and the network connection. Depending on the log level you choose when you run the utility, you can see information about the ongoing migration.
- Make sure that `mapisp32.exe`, used with Microsoft Outlook versions prior to Microsoft Outlook XP, and `outlook.exe` are not running concurrently with `ExMigrate`.

---

---

**Note:** To see the full set of command-line arguments you can use with `ExMigrate`, open the file `readme.txt` or run `exmigrate.exe /h`.

---

---

To run `ExMigrate`:

1. Open the command prompt on the client machine.
2. Use the command, `cd <directory name>`, to change to the folder where the utility is stored.
3. Run `exmigrate.exe` with the required parameters. The parameters include:
  - `/f /c config file full path/config.ini`: This specifies a `config.ini` file to use.
  - `/p`: This specifies that once the configuration is loaded into memory, you will be prompted with a status message and asked to confirm the migration.
  - `/L`: This specifies the log levels for the log file and console. The various log levels are:
    - None: Nothing will be logged.
    - Error: Logs errors but continues. For example, if the copy message failed, continue with the next one.
    - Warning: Logs unusual situations, normally harmless.
    - Journal: Logs all the messages, so there is lots of information.
    - Debug: Logs messages as well as errors for troubleshooting.
  - `/M`: This option allows printing of Microsoft Exchange mailboxes. To run this option, the `/C` option and only the Microsoft Exchange Server setting in the `config.ini` file are required.
  - `/O`: This is an advanced option and requires special options, with one or more comma separated values:
    - Prompt: Prompt after profile creation or modification.
    - Hide: Hide user info on console.

- `Stats`: Generate Server Statistics
- `Casesensitive`: Case sensitive Microsoft Exchange user name in `[MasterList]`.
- `Skipdistlist1`: Skip distribution lists (as attendees) based on address type.
- `Skipdistlist2`: Skip distribution lists (as attendees) based on object type.
- `Skipfirstinsubset`: Put a `/D=2` to the first user without processing it.
- `/?`: Help
- `/hint <Exchange Profile>`: Print Exchange Server settings from the help profile. This option is used to extract the Organization, Domain, Server, and ExchangeAdmin fields of Microsoft Exchange Server.
- `/E`: Encrypt password for SysOp or users. This option cannot be used with any other switch.
- `/NODN`: Domain names are generated based on `[ExchangeServer]` settings instead of dynamically generating all Mailbox and Server domain names. This option should be used only if the connection cannot be made properly when trying to generate domain names.

---

**Note:** You can specify different log levels on-screen and on file. For example, you can use the parameters `/L journal, warning` to display journal logs on screen and store warning logs in a file.

---

Once you have started the utility, `ExMigrate` loads user information and, according to the log levels you set, displays this information. Next, messages are copied over in two stages: First, the folders are created, then the messages are copied. If the folder structure is disrupted, you can take action without deleting any messages. Also, you should monitor the progress of the migration on screen.

## Evaluating the Results

To ensure that data migration was successful, you need to evaluate the results of migration. Some of the ways to perform the evaluation include:

- Check the log file. The log file describes the full execution of `ExMigrate`. You can search for entries such as `error`, `fatal`, and `terminate`. These can indicate when things started to go wrong.
- Search for warnings. Most warnings are benign, but some might be of high importance. For example, if the user name X is not found in the `[MasterList]` section, that user would be considered an external attendee.
- Examine the statistics for each user, especially the number of messages copied and the total number of messages. In addition, check the global information such as time taken for each user and total time.
- After the successful migration of a user profile, a `/D=1` switch is added to the beginning of that user profile line in the `[MigrationSubset]` section. So, if you run the program again, this user will not be migrated again.
- Open some Oracle Collaboration Suite accounts with Microsoft Outlook, try to use a profile with both Microsoft Exchange and Oracle Collaboration Suite, check if the

meetings and e-mail have been migrated, and the attendee status has been preserved. The status of calendar meeting recipients appears in the Attendee List of Microsoft Exchange meetings as Accepted, Declined, Tentative, or None. This status can only be maintained if `MaintainLinks` is set to 1 in the configuration file, and `[MasterList]` contains all or most of the information about attendees. Leaving the attendee information out from `[MasterList]` will result in losing the status information.



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## Migrating Calendar Data from MeetingMaker

This chapter describes how to migrate calendar data from MeetingMaker. The chapter contains the following sections:

- [Migration Process](#)
- [System Requirements for unimmimpsrv](#)
- [Migration Guidelines](#)
- [Exporting MeetingMaker Data](#)
- [Editing unimmimpsrv.ini](#)
- [Performing Migration](#)
- [Verifying Migration](#)

### Migration Process

The migration process from MeetingMaker requires the use of the following command-line utilities, which are found in the `$ORACLE_HOME/ocal/bin` directory:

- `unimmimpsrv`
- `unistart`
- `unistop`
- `uniaddnode`

For more information about these utilities, see the *Oracle Calendar Reference Manual*.

By default, you can migrate data from MeetingMaker to a standalone internal Calendar server. So you need to perform extra steps to complete the migration if your goal is to migrate to Oracle Collaboration Suite or a standalone external Calendar server. The high-level migration process is as follows:

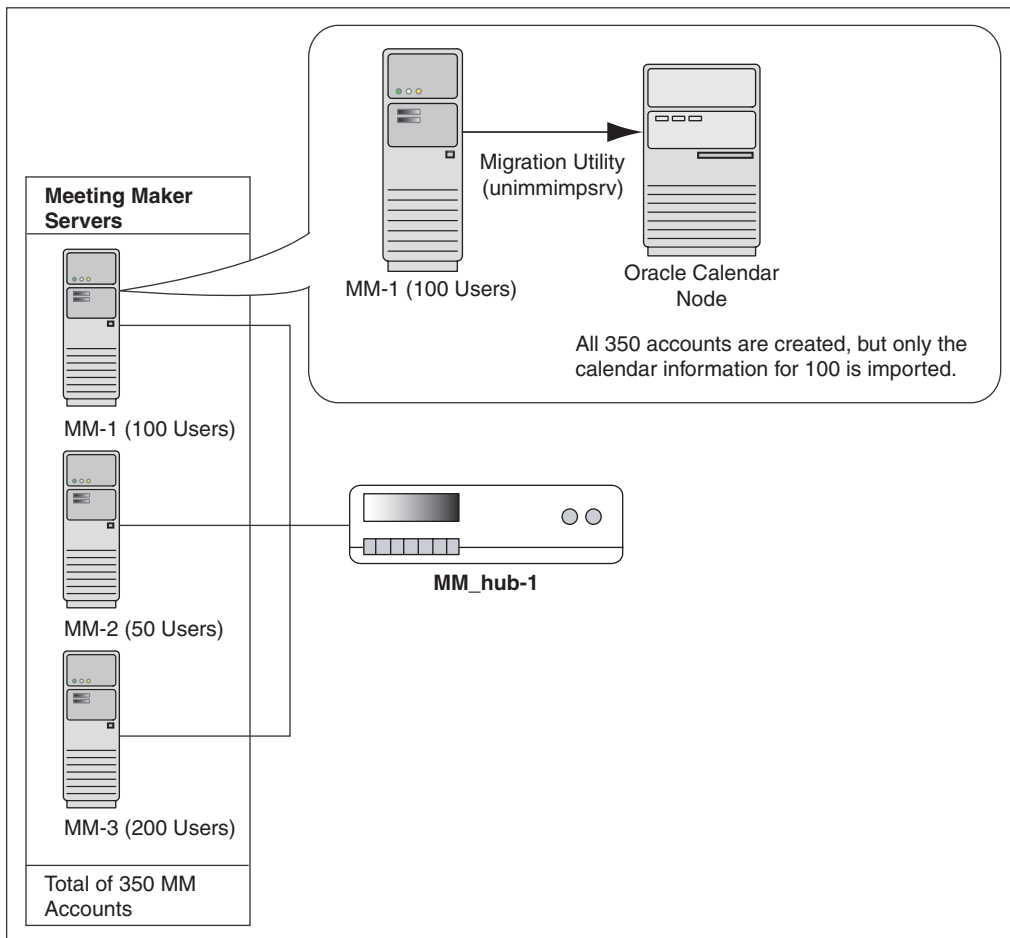
1. Planning the deployment of the Calendar server. Refer to "[Planning Calendar Server Deployment](#)" in [Chapter 4, "Calendar Migration Planning"](#).
2. Exporting MeetingMaker data into `.dat` files:
3. Migrating the data to the planned Calendar nodes.
4. Migrate to an external Calendar or an Oracle Collaboration Suite installation.

**See Also:** [Appendix B, "Migrating from A Standalone Internal Calendar Server To Oracle Collaboration Suite"](#) for more information on upgrading from internal Calendar to Oracle Collaboration Suite installation and [Appendix C, "Migrating from Internal Calendar Server to External"](#) for more information on upgrading from internal Calendar to external Calendar installation.

To begin migrating data from MeetingMaker to Oracle Calendar, you need to obtain the MeetingMaker server export file. You can use MeetingMaker servers to export the MeetingMaker database to a binary file format (\*.dat). This file is used to upgrade server versions and archive the database. The .dat file format is standard for the current MeetingMaker server versions, so the `unimmimpsrv` utility reads this file to get the current MeetingMaker information.

MeetingMaker also has a server-database topology similar to the Oracle Calendar node topology. MeetingMaker servers are connected so that the local and remote users can collaborate. The servers connect using a MeetingMaker hub. When the servers are connected, each server has a list of users connected to the same hub. If you import only one MeetingMaker server that is connected to other servers, the `unimmimpsrv` utility creates accounts in Oracle Calendar for all the users that are connected to the hub. Refer to [Figure 6-1](#).

**Figure 6-1 Migrating Using unimmimpsrv**



## System Requirements for unimmimpsrv

A sample `$ORACLE_HOME/ocal/misc/unimmimpsrv.ini.sbs` is provided with the utility. Use that file to create your customized configuration file, `unimmimpsrv.ini` before starting the migration.

---



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**Note:** Oracle Calendar has been certified with the following MeetingMaker versions: 5.x, 6.x, 7.0, 7.0.1, 7.0.2, 7.1, 7.2, and 7.5.3.

---



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## Migration Guidelines

Adherence to the following guidelines will help facilitate the successful migration of calendar data:

- During migration, the `unimmimpsrv` utility creates accounts for the users from MeetingMaker. You cannot append to accounts already created in Oracle Calendar.
- The utility appends information to a node by creating new accounts. You can run the utility more than once on a node to add MeetingMaker servers at different times.
- Running the utility more than once on the same MeetingMaker server and node creates duplicates. Always create a backup of the node prior to importing data.
- You can import more than one MeetingMaker server into a single node, but you cannot import one MeetingMaker server into more than one node.
- You can import more than one MeetingMaker server into a node, simultaneously, if the servers are connected to a MeetingMaker hub and are in sync.
- You can configure the `unimmimpsrv` utility to import multiple MeetingMaker servers into multiple nodes.
- The Oracle Calendar server must be up to run the `unimmimpsrv` utility. The migration tool logs onto the server to add accounts and entries much like any other utility such as `uniuser`.
- The `unimmimpsrv` utility can run only in non-LDAP environments.

The MeetingMaker server export files need to be placed on the drive of the workstation or server that will be running the utility. The utility comprises the following:

- The binary file, `unimmimpsrv` on UNIX, or `unimmimpsrv.exe` on Microsoft Windows
- The `unimmimpsrv.ini`
- The data files to be imported from the MeetingMaker servers

## Exporting MeetingMaker Data

You need to export MeetingMaker data before starting migration. To do this:

1. Back up each MeetingMaker server that will be exported.
2. Purge all unnecessary data from each MeetingMaker server that will be exported.
3. Use the MeetingMaker Administrator utility to export each MeetingMaker database to a `*.dat` binary file.

## Editing unimmimpsrv.ini

Edit the `$ORACLE_HOME/misc/unimmimpsrv.ini` file to specify which MeetingMaker files to import, which Calendar nodes to receive the data, and other migration settings. The following is a sample `unimmimpsrv.ini` file:

```
[node-ID]
mmexportfilelist={<Meeting Maker .dat file(s)>}
sysoppwd=<SYSOP password>
host=<hostname>
location=<TRUE or FALSE>
attendance=<TRUE or FALSE>
usernameprint=<TRUE or FALSE>
useronly=<TRUE or FALSE>
printcounters=<TRUE or FALSE>
noimport=<TRUE or FALSE>
orgunit1=TRUE/FALSE
privdomain=TRUE/FALSE
admindomain=TRUE/FALSE
holidays=FALSE/TRUE
```

[node-ID] indicates the Calendar node number. [Table 6-1](#) describes the properties of the `unimmimpsrv.ini` file:

**Table 6-1 Properties of unimmimpsrv.ini**

Entry	Permitted Values	Description
mmexportfilelist	<i>{Meeting Maker .dat files}</i>	Defines the list of MeetingMaker server files to import. Multiple entries must be separated by commas and should have the braces.
sysoppwd	<i>SYSOP password</i>	Oracle Calendar node Sysop password.
host	<i>hostname</i>	Calendar server host name.
location	<i>TRUE or FALSE</i>	Specifies whether or not the meeting location gets imported.
attendance	<i>TRUE or FALSE</i>	Specifies whether or not the attendance status is updated during import.
usernameprint	<i>TRUE or FALSE</i>	Specifies whether or not the utility displays the usernames being imported while it is running.
useronly	<i>TRUE or FALSE</i>	Specifies if the accounts get created without importing calendar data.
printcounters	<i>TRUE or FALSE</i>	Specifies the display of counters during migration.
noimport	<i>TRUE or FALSE</i>	Setting this value to TRUE will allow the utility to read the <code>unimmimpsrv.ini</code> file and the MeetingMaker export files, but not import any data or create accounts. There will be no change to the Oracle Calendar node.
mapdepartment (orgunit1)	Calendar attribute OU1	Determines the calendar attribute to which the department name should be transferred. If this field is set to an empty string, the department name will not be imported.



**Table 6–1 (Cont.) Properties of unimmimpsrv.ini**

Entry	Permitted Values	Description
mapservername (privdomain)	Calendar attribute OU4	Determines to which calendar attribute the server name should be transferred. If this field is set to an empty string, the server name will not be imported.
mapcompany (admindomain)	Calendar attribute A	Determines to which calendar attribute the company name should be transferred. If this field is set to an empty string, the company name will not be imported.
holidays	TRUE or FALSE	Specifies whether or not holidays are migrated.
mmtimezonelist	{timezone}	Specifies the time zone of the MeetingMaker server file being migrated. The number of the time zones listed should match with the number of MeetingMaker import files. If multiple files are imported, the time zone values should be separated by commas.
importproxy	TRUE or FALSE	Specifies whether or not to import proxies (viewing right/designates). All proxies, regardless of read/write access, are granted only viewing rights to the Oracle Calendar agenda.
importpassword	TRUE or FALSE	Specifies whether or not to import item password. If the value is set to FALSE, item passwords are set to NULL. The password may be truncated if it is longer than 15 characters.
mapsignin	Calendar attribute	In MeetingMaker, users log in with the unique attribute <code>signin</code> . In <code>unimmimpsrv.ini</code> , <code>mapsignin</code> maps <code>signin</code> to a calendar attribute. Generally, this calendar attribute is <code>UID</code> , but it could instead be an attribute such as <code>email</code> . If <code>mapsignin</code> is left empty in <code>unimmimpsrv.ini</code> ( <code>[mapsignin = ""]</code> ), the <code>signin</code> attribute is not imported. If <code>mapsignin</code> is left out of <code>unimmimpsrv.ini</code> altogether, <code>signin</code> is mapped to <code>UID</code> by default.
mapemail	Calendar attribute MAIL	Determines the calendar attribute to which the e-mail should be transferred. If this field is set to an empty string, the e-mail address will not be imported.

## Preparing the Calendar Server for Migration from MeetingMaker

To ensure a smooth upgrade of MeetingMaker information, some Calendar server configuration settings need to be modified. MeetingMaker, by default, allows double booking of resources, which leads to a resource conflict. However, Oracle Calendar does not allow double booking. In Oracle Calendar, resource access is "first-come first-served." So, there is no possibility of a resource conflict. Before migrating existing MeetingMaker data to Oracle Calendar, you need to temporarily configure Oracle Calendar to allow double booking.

To do so, you need to edit the `ORACLE_HOME/ocal/misc/unison.ini` file, and add or modify the `allowresourceconflict` key in the `[ENG]` section of the file. The modified section should look like the following:

```
[ENG]
.....
```

```
allowresourceconflict=TRUE  
.....
```

## Performing Migration

The following are the steps of migrating calendar data from MeetingMaker:

1. Start the Oracle Calendar server by running the `unistart` command-line utility.

```
$ $ORACLE_HOME/ocal/bin/unistart
```

2. Create a Oracle Calendar node to store the MeetingMaker data by running the `uniaddnode` command-line utility:

```
$ $ORACLE_HOME/ocal/bin/uniaddnode -n <Calendar_node_number>
```

3. Initiate the MeetingMaker migration by running the `unimmimpsrv` command-line utility.

```
$ $ORACLE_HOME/ocal/bin/unimmimpsrv
```

4. Obtain the list of users and resource identifiers for LDAP setup with the `uniuser` command. Use these lists later for LDAP integration of existing MeetingMaker users and resources.

5. Stop the Oracle Calendar instance by running the `unistop` command-line utility.

```
$ $ORACLE_HOME/ocal/bin/unistop
```

## Sample Output for `unimmimpsrv`

The following is a sample output returned by a successful MeetingMaker migration:

```
Importing User Proxies...  
329  
Importing User Agendas:  
1 Vicky Groups: 2 Tasks: 1 Meetings: 594 insts: 0 atts: 0  
2 Susan Groups: 2 Tasks: 18 Meetings: 391 insts: 0 atts: 0  
3 TBV Groups: 2 Meetings: 2231 insts: 0 atts: 0  
4 Dorothy Groups: 2 Meetings: 257 insts: 0 atts: 0  
5 JAZ Groups: 2 Meetings: 2487 insts: 0 atts: 0  
6 Nothing to import for user Margo Carter  
7 Nothing to import for user Christine Dyck  
8 Nothing to import for user Karen Merritt  
9 Nothing to import for user Harold Leece  
10 Nothing to import for user Marie Lococo  
11 Nothing to import for user Pauline McCormack  
12 Nothing to import for user Susan Mifsud  
13 Nothing to import for user Pat Miller  
14 Nothing to import for user Bridgette Gauthier  
15 Nothing to import for resource HR-Small Mtg Room  
16 Nothing to import for user Nina Slack  
17 Nothing to import for user Val Wolfe  
18 Nothing to import for user David Atkinson  
19 Nothing to import for user Luaine Hathaway  
20 Nothing to import for user Darren Harper  
21 Sharon Groups: 1 Meetings: 92 insts: 4 atts: 0  
22 TerryBoak Groups: 1 Meetings: 3393 insts: 69 atts: 0  
23 Nothing to import for resource HR-Large Mtg Room  
24 Nothing to import for user Ruth Esau  
25 Nothing to import for user Marg Skeoch  
26 Nothing to import for user Marilyn Chute
```

```
27 MKoop Groups: 1 Tasks: 1 Meetings: 124 insts: 0 atts: 0
28 resource Finance Mtg Room
29 Nothing to import for user Joyce Samuels
30 Nothing to import for user Jack Miller
31 Ron Groups: 1 Meetings: 8 insts: 0 atts: 0
32 Nothing to import for user Karen Wright
33 kepp Groups: 1 Meetings: 82 insts: 0 atts: 0
TOTAL of 11 agendas out of 33 users
Meeting Maker DataBase succesfully
```

## Verifying Migration

View the `$ORACLE_HOME/ocal/logs/unimmimpsrv.log` file. This file will contain the start and end times and duration of the MeetingMaker migration utility. It will also contain the steps that the utility has performed as well as any errors it has encountered.



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## Migrating Calendar Data from Netscape

To migrate calendar data from Netscape to Oracle Calendar, you must follow a specific migration path. This involves migrating calendar data from Netscape Calendar to CorporateTime and then upgrading from CorporateTime to Oracle Calendar. This chapter describes how to migrate calendar data from Netscape Calendar to Oracle Calendar.

The chapter contains the following migration scenarios:

- [Upgrading Netscape Calendar to CorporateTime 5.4](#)
- [Upgrading CorporateTime to Oracle Calendar](#)
- [Upgrading Oracle Calendar to Oracle Collaboration Suite with Coexistence](#)
- [Upgrade Oracle Calendar to Oracle Collaboration Suite Without Coexistence](#)

### Upgrading Netscape Calendar to CorporateTime 5.4

Before migrating from Netscape Calendar to CorporateTime 5.4, you need to shut down the Netscape Directory server and the Netscape Calendar server, and then back up the Netscape Calendar server database and configuration files.

The following are the tasks required when migrating from Netscape Calendar to CorporateTime 5.4:

- [Task 1: Back Up the Netscape Calendar Server](#)
- [Task 2: Extending the Netscape Directory Server Schema](#)
- [Task 3: Reconfiguring Directory Server Database](#)
- [Task 4: Installing CorporateTime 5.4](#)

#### Task 1: Back Up the Netscape Calendar Server

To back up the Netscape Calendar server:

1. Stop the Netscape Directory server and Netscape Calendar server.
2. Back up the Netscape Calendar database and configuration files:
  - On Windows:
    - Copy the entire C:\unison directory (and its subdirectories) to another drive or another computer.
    - Uninstall the Netscape Calendar server to remove all associated registry entries.

- On UNIX:
  - Copy all the `/users/unison/db/nodes/Nx` (where `x` is an integer from 0 to the number of nodes in the server) directories (and their subdirectories) to a safe location.
  - Copy the `/users/unison/misc` directory to a safe location.

## Task 2: Extending the Netscape Directory Server Schema

To extend the Netscape Directory server schema:

1. Extract the following files from the CorporateTime 5.4 installation package and copy them to the `/Netscape_Directory_Server_path/slapd-server_name/config` directory:
  - `oracle-calendar-schema.conf`
  - `oracle-calendar-globopt.conf`
2. Add the line in bold to the `/Netscape_Directory_Server_path/slapd-server_name/config/slapd.conf` file:

```
include /Netscape_Directory_Server_path/slapd-server_name/config/ns-schema.conf
include /Netscape_Directory_Server_path/slapd-server_name/config/oracle-calendar-schema.conf
```
3. Edit the `/Netscape_Directory_Server_path/slapd-server/config/slapd-ldbm.conf` file to include the following line at the bottom of the file:

```
include /Netscape_Directory_Server_server_path/slapd-server_name/config/oracle-calendar-globout.conf
```
4. Restart the Netscape Directory server to apply the configuration changes.

## Task 3: Reconfiguring Directory Server Database

1. Stop the Netscape Directory server and extract the LDAP server data for editing:

```
$ ./stop-slapd
$ cd /Netscape_LDAP_server_path/bin/slapd/server
$ ./ns-slapd/db2ldif
  -f /Netscape_LDAP_server_path/slapd-server_name/config/slapd.conf
  -i /Netscape_LDAP_server_path/slapd-server_name/ldif/FILENAME
```

2. Edit `FILENAME` as follows:
  - Replace all occurrences of `nscal` with `ctcal`.
  - Replace all occurrences of `nsCal` with `ctCal`.
3. Load `FILENAME` into the Netscape LDAP server:

```
$ ./ns-slapd/ldif2db
  -f /Netscape_LDAP_server_path/slapd-Server_name/config/slapd.conf
  -C
  -i /Netscape_LDAP_server_path/slapd-Server_name/ldif/FILENAME
$ ./start-slapd
```

## Task 4: Installing CorporateTime 5.4

To install CorporateTime 5.4:

1. Perform the installation process outlined in the CorporateTime Server 5.4 Readme, which is located at

[http://www.steltor.com/notes/corptime-server/5\\_4/readme.htm#1001884](http://www.steltor.com/notes/corptime-server/5_4/readme.htm#1001884)

In the Readme file, follow the section "Installing CorporateTime Server with Internal Directory."

2. Modify the `unison.ini` file so that it contains the appropriate node entries at the end of the file.

## Upgrading CorporateTime to Oracle Calendar

You can automatically upgrade CorporateTime or Oracle Calendar 3.x data to the new version of the Oracle Calendar application system.

Refer to Oracle Collaboration Suite Installation guides for directions on how to upgrade from CorporateTime to Oracle Calendar standalone.

## Upgrading Oracle Calendar to Oracle Collaboration Suite with Coexistence

This section outlines the upgrade process from Oracle Calendar standalone with a Lightweight Directory Access Protocol (LDAP) directory server, to Oracle Collaboration Suite 10g Release 1 (10.1.1), which uses Oracle Internet Directory. In this scenario, the following LDAP directory servers are supported:

- Netscape 4.x
- iPlanet
- Sun ONE 5.x

This scenario assumes that you have other applications that use a Netscape, iPlanet, or Sun ONE directory server and, therefore, you need to keep and manage this directory server along with the Oracle Internet Directory server. The Oracle Directory Integration Platform (DIP), a feature of Oracle Internet Directory, is used to keep the user data in both directory servers synchronized.

The section contains the following:

- [Installing Oracle Collaboration Suite](#)
- [Migrating the Directory Entries](#)
- [Configuring the Synchronization](#)
- [Migrating the Calendar Database](#)

### Some General Notes and Assumptions

Before you begin the procedure of upgrading to Oracle Collaboration Suite, take note of the following assumptions and limitations regarding this procedure.

- You currently have Oracle Calendar and a iPlanet, Netscape, or Sun ONE directory server installed and running.

- The synchronization will be one-way only (from iPlanet, Netscape, or Sun ONE to Oracle Internet Directory).
- Once the migration is completed, you can only add new users through the iPlanet, Netscape, or Sun ONE directory server.

---

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**Note:** If you add a new user to a Calendar server node on the iPlanet, Netscape, or Sun ONE directory server, the user still appears as available when viewed from the Calendar server node on Oracle Internet Directory. Therefore, whenever you add a new user to the Calendar server node on Oracle Internet Directory, ensure that the user has not been already added to another node.

---

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## Installing Oracle Collaboration Suite

You need to install Oracle Collaboration Suite and ensure that all the tiers of Oracle Collaboration Suite are running.

Refer to *Oracle Collaboration Suite Installation Guide for Microsoft Windows* for the installation details.

## Migrating the Directory Entries

This section outlines how to migrate the directory data from the iPlanet, Netscape, or Sun ONE directory server to Oracle Internet Directory. This procedure involves exporting the directory entries from the iPlanet, Netscape, or Sun ONE directory server to an LDAP Data Interchange Format (LDIF) file, and then importing it into Oracle Internet Directory.

The following are the tasks that you require to perform to migrate directory entries:

- [Task 1: Exporting the Directory Entries from Netscape Directory Server](#)
- [Task 2: Analyzing the LDIF Files for Any Required Schema Additions Referenced in the LDIF Data](#)
- [Task 3: Extending the Schema in Oracle Internet Directory](#)
- [Task 4: Removing Any Proprietary Directory Data from the LDIF File](#)
- [Task 5: Removing Operational Attributes from the LDIF File](#)
- [Task 6: Removing Incompatible userPassword Attribute Values from the LDIF File](#)
- [Task 7: Adding the Oracle Internet Directory Object Classes to the LDIF Files](#)
- [Task 8: Running bulkload.sh to Find Any Remaining Schema Violations or Duplication Errors \(Optional\)](#)
- [Task 9: Importing the Modified LDIF Files into the Oracle Internet Directory Server](#)
- [Task 10: Converting the Directory Entries from Netscape to Oracle Internet Directory Format](#)

### Task 1: Exporting the Directory Entries from Netscape Directory Server

Use the `ldapsearch` command with the following syntax to export directory entries for resources:

```
$ORACLE_HOME/bin/ldapsearch -h Netscape_directory_server_hostname -p Netscape_directory_server_port -D manager_DN -w manager_DN_password -b baseDN
```



```
"objectclass=ctcalresource" > resources_LDIFfile
```

Use the `ldapsearch` command with the following syntax to export directory entries for users and event calendars:

```
$ORACLE_HOME/bin/ldapsearch -h Netscape_directory_server_hostname -p Netscape_
directory_server_port -D manager_DN -w manager_DN_password -b basedn
"objectclass=inetorgperson" > users_LDIFfile
```

The entries in the resulting LDIF files should look similar to the following:

```
dn: uid=hmoore,ou=People, dc=ca,dc=oracle,dc=com
uid:hmoore
sn:Moore
cn:Henry Moore
objectclass:top
objectclass:person
objectclass:organizationalPerson
objectclass:inetorgperson
objectclass:ctCalUser
givenname:Henry
ctcalxitemid:00010:00259
ctcalpublishedtype:0
...
```

---

**Note:** With some older versions of `ldapsearch`, the line beginning `dn:` is not included in the file and all colons (`:`) are replaced by the equal to sign (`=`). In this case, modify the file so the user entries follow the same format as the example given.

---

## Task 2: Analyzing the LDIF Files for Any Required Schema Additions Referenced in the LDIF Data

Before you import the LDIF files, you must add any attributes that are not in the Oracle Internet Directory base schema to the Oracle Internet Directory base schema.

If there were any modifications made to the base schema of your current directory server, you must make the same modifications to the base schema of the Oracle Internet Directory. However, this is only necessary if you also want to transfer the information in these attributes to the Oracle Internet Directory.

Some directory servers may support the use of configuration files for defining extensions to their base schema. However, Oracle Internet Directory does not. If you have a configuration file for your directory server, you can use it as a guideline for extending the base schema of the Oracle Internet Directory.

## Task 3: Extending the Schema in Oracle Internet Directory

Use either the Oracle Directory Manager or the SchemaSynch tool to extend the schema in Oracle Internet Directory.

**See Also:** *Oracle Internet Directory Administrator's Guide*

## Task 4: Removing Any Proprietary Directory Data from the LDIF File

Various directory vendors implement access control item (ACI) policy objects in ways that do not translate well across vendor installations. Therefore, remove any ACI entries from the LDIF file.

After the basic entry data has been imported from the cleaned up LDIF file to Oracle Internet Directory, you must explicitly reapply security policies in the Oracle Internet Directory environment. You can do this by using either Oracle Directory Manager, or command-line tools and LDIF files containing the desired access control policy (ACP) information.

There may be other proprietary metadata unrelated to access control. You should remove this as well. Understanding the various Internet Engineering Task Force (IETF) Requests For Comments (RFCs) can help you determine which directory metadata is proprietary to a given vendor and which complies with the LDAP standards, and is portable using an LDIF file.

### **Task 5: Removing Operational Attributes from the LDIF File**

Remove the following four operational attributes from the LDIF file:

- `creatorsName`
- `createTimestamp`
- `modifiersName`
- `modifyTimestamp`

These standard operational attributes are automatically generated by Oracle Internet Directory whenever entries are created or imported. It is not possible to instantiate these values by importing an LDIF file. Therefore, you should remove these attributes before importing the file.

### **Task 6: Removing Incompatible userPassword Attribute Values from the LDIF File**

Oracle Internet Directory supports the following `userPassword` attribute hash algorithms:

- No encryption
- MD4
- MD5
- SHA
- UNIX Crypt

If the `userPassword` attribute hash algorithm used by your directory server is not one of these, then remove all lines corresponding to the `userPassword` attribute and value from the LDIF data file. After you import the LDIF data into Oracle Internet Directory, manually re-enter or upload the hashed `userPassword` information into the directory.

### **Task 7: Adding the Oracle Internet Directory Object Classes to the LDIF Files**

Many of the Oracle Collaboration Suite applications expect the user entry to contain `orclUser` and `orclUserV2` object classes. Use the following script (`convert.sh`) to add these object classes to each user entry in the LDIF file.

---



---

**Note:** To run shell script tools on the Windows operating system, you need one of the following UNIX emulation utilities:

- Cygwin

Visit <http://sources.redhat.com/cygwin/>

- MKS Toolkit

Visit

<http://www.datafocus.com/products/tk/default.asp>

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### The convert.sh Script

```
#!/bin/sh
SOURCEDN="ou=people, <basedn>"
TARGETDN="cn=users, <basedn>"
if [ "$1" = "" ]
then
    echo "usage: convert.sh filename"
    exit 2;
fi
FILENAME=$1
while read XX
do
    if [ ! -z "`echo $XX | grep "$SOURCEDN"`" ]
    then
        # add "dn: " if necessary
        if [ -z "`echo $XX | grep "^dn:"`" ]
        then
            echo -n "dn: " >> $FILENAME.$$
        fi
        echo $XX | sed "s/$SOURCEDN/$TARGETDN/g" >> $FILENAME.$$
        echo "objectclass: orclUser" >> $FILENAME.$$
        echo "objectclass: orclUserV2" >> $FILENAME.$$
    else
        echo $XX >> $FILENAME.$$
    fi
done < $FILENAME
\mv $FILENAME.$$ $FILENAME
```

After you run `convert.sh`, the user entries in the LDIF file should look similar to the following:

```
dn: uid=hmoore,cn=users,dc=ca,dc=oracle,dc=com
objectclass: orclUser
objectclass: orclUserV2
uid:hmoore
sn:Moore
cn:Henry Moore
objectclass:top
objectclass:person
objectclass:organizationalPerson
objectclass:inetorgperson
objectclass:ctCalUser
givenname:Henry
ctcalxitemid:00010:00259
ctcalpublishedtype:0
```

You are now ready to import the directory entries into the Oracle Internet Directory server.

### Task 8: Running bulkload.sh to Find Any Remaining Schema Violations or Duplication Errors (Optional)

Before you import the LDIF files, you can use the bulkload utility in check mode to perform a check on the LDIF file. The bulkload output reports any inconsistencies in the data.

---

---

**Note:** To run shell script tools on the Windows operating system, you need one of the following UNIX emulation utilities:

- Cygwin  
Visit <http://sources.redhat.com/cygwin/>
  - MKS Toolkit  
Visit  
<http://www.datafocus.com/products/tk/default.asp>
- 
- 

**See Also:** *Oracle Internet Directory Administrator's Guide*

### Task 9: Importing the Modified LDIF Files into the Oracle Internet Directory Server

Import the modified LDIF files into the Oracle Internet Directory server using the following:

```
$ORACLE_HOME/bin/ldapadd -h OID_hostname -p OID_port -D "cn=orcladmin" -w  
orcladmin_password -f LDIFfile
```

### Task 10: Converting the Directory Entries from Netscape to Oracle Internet Directory Format

Use the following command to convert the directory entries:

```
$ORACLE_HOME/ocal/bin/unioidconf -upgrade
```

You can safely ignore any warnings generated in the `unioidconf.log` file.

## Configuring the Synchronization

Configure the synchronization between Oracle Internet Directory and the iPlanet, Netscape, or Sun ONE directory server.

The following are the tasks that you require to perform to configure the synchronization:

- [Task 1: Creating a Synchronization User Account on the iPlanet, Netscape, or Sun ONE Directory Server](#)
- [Task 2: Creating a Retro Changelog Plugin on the iPlanet/Sun ONE 5.x Directory Server](#)
- [Task 3: Configuring Synchronization with Oracle Internet Directory](#)
- [Task 4: Configuring the Login Attribute](#)
- [Task 5: Setting the Mapping Rules](#)
- [Task 6: Configuring an Integration Profile](#)
- [Task 7: Granting Access Rights to the Oracle DIP Agent](#)
- [Task 8: Starting the Synchronization Service](#)

### Task 1: Creating a Synchronization User Account on the iPlanet, Netscape, or Sun ONE Directory Server

The Oracle Internet Directory synchronization service needs to bind to a user account to access and optionally modify data on the iPlanet, Netscape, or Sun ONE directory server. Although it is possible to use an existing entry, it is highly recommended to create a new entry for this purpose. Take note of the distinguished name and the distinguished name password used for this entry.

---



---

**Note:** Ensure the account password contains at least eight characters.

---



---

The synchronization user account must have certain access rights so that the Oracle Internet Directory synchronization service can perform the required operations. For example, if you wish to establish a one-way synchronization from the iPlanet, Netscape, or Sun ONE directory server to Oracle Internet Directory, the user account needs to have read access to the subtree and to all object classes and attributes to be synchronized. On the other hand, if you wish to establish a two-way synchronization, this user account need only have write access to the subtree.

### Task 2: Creating a Retro Changelog Plugin on the iPlanet/Sun ONE 5.x Directory Server

The DIP synchronization service relies on a `changelog` capability to monitor any changes in the external directory server.

In the iPlanet or Sun ONE 5.x directory server, the `changelog` format has been modified and it is no longer compatible with DIP synchronization service. You must enable the Retro Changelog Plugin capability in the iPlanet or Sun ONE 5.x directory server in order to use the DIP synchronization service.

To enable the Retro Changelog Plugin feature in the iPlanet or Sun ONE directory server:

1. Create an LDIF file with the following content:

```
dn: cn=Retro Changelog Plugin, cn=plugins,cn=config
changetype: modify
replace: nssldapd-pluginenabled
nssldapd-pluginenabled: on
```

2. Apply the LDIF file using `ldapmodify` as follows:

```
$ORACLE_HOME/bin/ldapmodify -h iplanethost -p iplanetport -D iplanetmgrdn -w
iplanetmgrpassword -f ldif_filename
```

3. Navigate to the `slapd-hostname` directory and run the following commands as `root` to restart the directory server.

```
./stop-slapd
./start-slapd
```

### Task 3: Configuring Synchronization with Oracle Internet Directory

Once the external directory server is up, proceed with the following steps to configure the Oracle Internet Directory synchronization:

1. Start the directory server console and log in as `cn=manager` with the password as `Directory`.
2. Click the **Server and Application** tab.

3. In the navigation tree, expand the **ServerGroup** container.
4. Select the directory server instance to synchronize then click **Open**.  
A window for managing the directory server instance you selected is displayed.
5. Click the **Configuration** tab.
6. Select the **Replication** container.
7. Click the **Consumer Settings** tab (**Legacy Consumer Settings** on iPlanet/Sun ONE 5.x directory server) and enter the synchronization user credentials.
  - a. In the Supplier DN field, enter the distinguished name of the synchronization user.
  - b. In the New Supplier Password field, enter the password for the synchronization user then click **Confirm**.
  - c. Take note of these credentials as you will need them for the Oracle Internet Directory synchronization profile.
  - d. Save the settings.
8. Click the **Supplier Settings** tab.
9. Set the **Changelog Database Directory**, if it has not been set.
10. Save the settings.
11. Obtain the value of the `lastchangenumber` attribute as you will need this value later. Use the following command:

```
$ORACLE_HOME/bin/ldapsearch -h iPlanetHost -p iPlanetPort -D manager dn -w  
manager password -b "" -s base "objectclass=*" "lastchangenumber"
```

#### Task 4: Configuring the Login Attribute

To log in to an LDAP-enabled application users need to enter a login attribute and a password. On Netscape, iPlanet, or Sun ONE servers, the `uid` (user ID) attribute is the one that is typically used. On Oracle Internet Directory servers, the attribute is configurable and the default is the `cn` attribute.

You can specify the `uid` attribute as the login attribute on the Oracle Internet Directory server so that end-users can use the same login for LDAP-enabled applications connected to a Netscape, iPlanet, or Sun ONE directory server and for LDAP-enabled applications connected to an Oracle Internet Directory server.

To set `uid` as a login attribute, use the following steps:

1. Create an LDIF file with the following contents.

```
dn: cn=Common, cn=Products, cn=OracleContext, <basedn>  
changetype: modify  
replace: orclcommonnicknameattribute  
orclcommonnicknameattribute: uid
```
2. Use the `ldapmodify` command to change the login attribute to `uid` as follows.

```
$ORACLE_HOME/bin/ldapmodify -h <OIDhost> -p <OIDport> -D cn=orcladmin -w  
<orcladminpassword> -f <LDIFfilename>
```

## Task 5: Setting the Mapping Rules

The mapping rules specify which attributes are synchronized between the Netscape, iPlanet, or Sun ONE server and Oracle Internet Directory. The rules are defined in a mapping file which resides on the Oracle Internet Directory server.

To set the mapping rules:

1. Using a text editor open the default mapping file at  
`$ORACLE_HOME/ldap/odi/conf/iplanet.map.master`
2. Edit the domain rule to match your directory hierarchy. For example, given a source DN of `ou=people,dc=ca,dc=oracle,dc=com` and a target DN of `cn=users,dc=oracle,dc=com` the domain rule will be:  
`ou=people,dc=ca,dc=oracle,dc=com:cn=users,dc=oracle,dc=com`
3. Edit the mapping file to define the mapping rules needed for your configuration.

The completed file should look similar to the following:

```
DomainRules
ou=people,dc=ca,dc=oracle,dc=com:cn=users,dc=ca,dc=oracle,dc=com
AttributeRules
# Mapping rules to map the domains and containers
o: :organization: o: :organization
ou: :organizationalUnit: ou: :organizationalUnit
dc: :domain:dc: :domain
# Mapping Rules to map users
uid : :person: uid: :inetOrgperson
sn: :person:sn: :organizationalperson
cn: :person:cn: :person
cn: :person:orclisVisible: :orclUserV2:"True"
mail: :inetorgperson: mail: :inetorgperson
employeenumber: :organizationalPerson: employeenumber: :organizationalperson
c: :country:c: :country
l: :locality:l: :locality
telephonenumber: :organizationalPerson: telephonenumber:
:organizationalperson
userpassword: :person:userpassword: :person
title: :inetorgperson:title: :inetorgperson
givenname: :inetorgperson:givenname: :inetorgperson
#Mapping rule to map calendar item
cn: :person:cn: :ctcaluser
ctcalxitemid: :ctcaluser:ctcalxitemid: :ctcaluser
ctcalpublishedtype: :ctcaluser:ctcalpublishedtype: :ctcaluser
```

---

**Note:** Ensure you have no extra spaces at the end of each line and no extra blank lines at the end of the file.

---

4. Save the edited file with a `.map` extension (for example, `iplanetmapfile.map`).

## Task 6: Configuring an Integration Profile

Once the mapping rules have been set, create an integration profile and register it to the Oracle Internet Directory server. This enables the synchronization service. The integration profile contains the information needed to synchronize data with the iPlanet directory server.

To configure an integration profile:

1. Use the following command to upload the mapping file to the Oracle Internet Directory server.

```
OracleHome_path/ldap/odi/admin/ldapUploadAgentFile.sh -name IplanetImport
-LDAPhost OIDhostname -LDAPport OIDport -binddn cn=orcladmin -bindpass
orcladminpassword -config 1 -attrtype "MAP" -filename
fullpath/iplanetmapfile.map
```

---



---

**Note:**

- Make \$ORACLE\_HOME/bin the first path in the PATH environment variable.
  - Use the full path for the executable and the file location.
- 
- 

2. Start the Oracle Directory Manager. Use the following command:

```
$ORACLE_HOME/bin/oidadmin&
```

3. Establish a connection to the Oracle Internet Directory server and log in as the directory manager.
4. Expand the **Server Management** container.
5. Expand the **Integration Server** container and then select the appropriate configuration set. In most cases, this is the first configuration set.
6. Double-click the **iPlanetImport** profile.  
The Integration Profile: IPlanetImport window is displayed.
7. Click the **Execution** tab.
8. In the Connected Directory Account and Connected Directory Account Password fields, enter the distinguished name and distinguished name password of the synchronization user account created earlier.
9. In the Connected Directory URL field, enter the hostname and port number of Netscape, iPlanet, or Sun ONE directory server. For example:  
iPlanet.oracle.com:589.

---



---

**Caution:** It is very important to leave the Agent Execution Command field blank.

---



---

10. Click the **Mapping** tab.

Steps 11 and 12 prevent the same change from being exchanged between the two directories indefinitely.

11. In the Connected Directory Matching Filter field, enter the following:

```
modifiersname != <the distinguished name of the synchronization user>
```

12. In the OID Matching Filter field, enter the following:

```
modifiersname != orclodipagentname=iPlanetImport, cn=subscriber
profile,cn=changelog subscriber, cn= oracle internet directory
```

13. Click the **Status** tab.

14. In the Last Applied Change Number field, enter the `lastchangenumber` attribute value obtained from the iPlanet directory server earlier.



## Task 7: Granting Access Rights to the Oracle DIP Agent

For the synchronization to be successful, the Oracle DIP agent requires access rights to the user entries in the Oracle Internet Directory. Use Oracle Directory Manager to grant the necessary access rights.

To grant access rights to the Oracle DIP agent:

1. In the Oracle Directory Manager interface, navigate to the **System Objects** navigation tree.
2. In the **System Objects** navigation tree navigate to `Entry Management, cn=OracleContext, cn=Groups, cn=IASAdmins`.
3. Click the **Properties** tab.
4. In the `uniquemember` field, add the following user:

```
orclodipagentname=IplanetImport,cn=subscriber profile,cn=changelog  
subscriber,cn=oracle internet directory
```

5. Repeat this procedure for the following groups:
  - `cn=OracleDASCreateUser`
  - `cn=OracleDASDeleteUser`
  - `cn=OracleDASEditUser`

You must also propagate the access controls that you have set up in the Netscape, iPlanet, or Sun ONE directory server. For example, if you have an access control that says "only users with the attribute `ou=HR Department` is able to read the user salary attribute", you must create an equivalent access control in Oracle Internet Directory.

**SeeAlso:** *Oracle Internet Directory Administrator's Guide* for more information on modifying access controls

## Task 8: Starting the Synchronization Service

The Oracle Directory Integration Server provides the synchronization service.

**See Also:** *Oracle Internet Directory Administrator's Guide* for more information on the Oracle Directory Integration Server

To start the synchronization service:

1. Use the following command to start the Oracle Directory Integration Server.

```
$ORACLE_HOME/bin/oidctl connect=database_instance_name server=odisrv instance=1  
configset=1 flags="port=OIDport" start
```

---

---

**Note:** Ensure the `ORACLE_HOME` and `ORACLE_SID` environment variables have been set.

---

---

2. Click the **General** tab.
3. Ensure the **Profile Status** is set to `ENABLE`.
4. Click the **Status** tab and verify that the **Synchronization Status** is `Synchronization Successful`.

The directory servers are now synchronized.

## Migrating the Calendar Database

At this point, you have the following setup:

- The old Calendar standalone server with a node network pointing to the iPlanet server
- The new Oracle Collaboration Suite server installed and configured with a default node
- A synchronization established between the Netscape, iPlanet, or Sun ONE Directory server and Oracle Internet Directory

Migrating the Calendar database involves moving a node from the Netscape, iPlanet, or Sun ONE server to the Oracle Collaboration Suite server then reconfiguring the node network to recognize this change. This section describes the steps required to complete the migration and reconfiguration for a node network.

The following are the tasks that you require to perform to migrate the Calendar database:

- [Task 1: Moving the Database](#)
- [Task 2: Updating the Node Network Information on the Nodes](#)
- [Task 3: Creating a Calendar Node Entry on Oracle Internet Directory](#)
- [Task 4: Enabling the Replication of Calendar Data Between the Nodes](#)
- [Task 5: Regenerating the nodes.ini Files on both Calendar Servers](#)

If you only have a single node as opposed to a node network, perform the steps listed in "[Task 1: Moving the Database](#)" and "[Task 3: Creating a Calendar Node Entry on Oracle Internet Directory](#)".

### Task 1: Moving the Database

To move the Calendar database from Netscape, iPlanet, or Sun ONE Directory server to the Oracle Collaboration Suite server:

1. Copy the master node directory (`$ORACLE_HOME/ocal/db/nodes/N0`) of the database, from the Calendar standalone server to the new server in the Oracle Collaboration Suite.
2. Copy the `[CLUSTER]masternode` entry from the `unison.ini` file on the Calendar standalone server to the `unison.ini` file on the Oracle Collaboration Suite.

---

---

**Note:** Legacy systems with only a single node may not have this `[CLUSTER]masternode` entry in the `unison.ini` file. If this is the case, skip this step and the next.

---

---

3. In the `unison.ini` file on the Calendar standalone server, comment out the `[CLUSTER]masternode` entry as shown in the following example:

```
#[CLUSTER]
#masternode = 10
```

4. Copy the node information for the master node from the `unison.ini` file on the Calendar standalone server to the `unison.ini` file on the Oracle Collaboration Suite.

5. In the `unison.ini` file on the Calendar standalone server, comment out the node information for the master node as shown in the following example:

```
#[10]
#name = N0
#version = A.06.00
#timezone = EST5EDT

#[CLUSTER]
#masternode = 10

[21]
name = N1
version = A.06.00
timezone = EST5EDT
```

6. In the `unison.ini` file on the Oracle Collaboration Suite, comment out the information on the installed node (not the master node information that was just placed in the file).

The `unison.ini` file should look similar to the following:

```
[CLUSTER]
masternode=10

#This is the information for the database copied from the iPlanet server
#calserver $ORACLE_HOME/ocal/db/nodes/N0 to the Oracle Internet Directory
calendar server
#$ORACLE_HOME/ocal/db/nodes/N0

[10]
name = N0
version = A.06.00
timezone = EST5EDT

#Here is the node ID that was installed with the Collaboration Suite Calendar
#server. It has been replaced with the new node.

#[11]
#name = N0
#version A.06.00
#timezone = EST5EDT
```

## Task 2: Updating the Node Network Information on the Nodes

To preserve the node network and the related events and attendees information update the `remotenode.ini` file of each and every node in the Calendar node network. In the following procedure, the variable `iplanet_node` represents the node that is kept on the old Netscape, iPlanet, or Sun ONE server and the variable `OID_node` represents the node that was moved to the new Oracle Collaboration Suite server. The steps to update the node network information are:

1. On the Calendar standalone server, run the following command:

```
$ORACLE_HOME/ocal/bin/unidbfix -export -n iplanet_node
```

This creates the `$ORACLE_HOME/ocal/db/nodes/N1/perm/remotenode.ini` file

Open the `$ORACLE_HOME/ocal/db/nodes/N1/perm/remotenode.ini` file.

The contents of the file should appear similar to the following:

```
[10]
RN_NUMCONNECT = 2
RN_ACCESSMETHOD = 2
RN_SERVICENAME = "unieng"
RN_HOSTNAME = "standalone.ca.acme.com:5802"
```

2. Modify the `remotenode.ini` file with the new hostname and port of Oracle Collaboration Suite. The contents of the file should appear similar to the following:

```
[10]
RN_NUMCONNECT = 2
RN_ACCESSMETHOD = 2
RN_SERVICENAME = "unieng"
RN_HOSTNAME = "ocs.ca.acme.com:5872"
```

3. Update the remote host information with the following command:

```
$ORACLE_HOME/ocal/bin/unidbfix -import -n iplanet_node
```

4. On the Oracle Collaboration Suite server run the following command:

```
$ORACLE_HOME/ocal/bin/unidbfix -export -n OID_node
```

The variable `OID_node` is the node ID of the node that was copied to the Oracle Collaboration Suite server. This creates the `$ORACLE_HOME/ocal/db/nodes/N0/perm/remotenode.ini` file.

### Task 3: Creating a Calendar Node Entry on Oracle Internet Directory

Use the Oracle Directory Manager to create an entry on the Oracle Internet Directory server for the node that was moved.

1. Navigate to Entry Management, `cn=Oracle Context`, `cn=Products`, `cn=Calendar`, `cn=Node installed_node`

The variable `installed_node` represents the node that was created when you installed Calendar.

2. Right-click `cn=Node installed_node` and select **Create Like**.
3. In the Distinguished Name field, change `cn=Node` to `installed_nodecn=Node new_node`.

The variable `new_node` represents the node that was copied to the Oracle Collaboration Suite server.

4. Click the **Mandatory Properties** tab.
5. In the `cn` field, type `Nodes new_node`.
6. Click the **Optional Properties** tab.
7. Set the value of `orclCalendarStore` to `new_node` and click **OK**.

### Task 4: Enabling the Replication of Calendar Data Between the Nodes

In the `unison.ini` file of the Oracle Collaboration Suite server set the `[ENG]coexist_cwbasicauth` parameter to `TRUE`.

### Task 5: Regenerating the nodes.ini Files on both Calendar Servers

To regenerate the `nodes.ini` files:

1. Start both servers.
2. Rename the `nodes.ini` file on the Calendar server pointing to the Netscape, iPlanet, or Sun ONE directory server to `nodes.ini.old`.
3. Run the following command on the Oracle Collaboration Suite server:

```
uninode -init
```

This generates the `nodes.ini` files with proper node network information on both servers.

The migration is now complete.

## Upgrade Oracle Calendar to Oracle Collaboration Suite Without Coexistence

This scenario assumes that once the migration is complete the user accounts will be managed through the Oracle Internet Directory server. The section contains the following:

- [Installing Oracle Collaboration Suite](#)
- [Migrating the Directory Entries](#)
- [Migrating the Calendar Database](#)

---

---

**Note:** This procedure assumes that you have already upgraded the Oracle Calendar standalone installation to the latest release of Oracle Calendar.

---

---

### Installing Oracle Collaboration Suite

When you install the Oracle Collaboration Suite, use the same node network configuration (nodes and node IDs) as your current configuration.

Refer to *Oracle Collaboration Suite Installation Guide for Microsoft Windows* for installation details.

### Migrating the Directory Entries

Once you have Oracle Collaboration Suite installed you can migrate the directory entries from the Netscape, iPlanet, or Sun ONE directory server to the Oracle Internet Directory server.

Perform the following tasks to migrate directory entries:

- [Task 1: Stopping Both the Servers](#)
- [Task 2: Exporting Directory Entries from the Netscape, iPlanet, or Sun ONE Directory Server into an LDIF File](#)
- [Task 3: Analyzing the LDIF Files for Any Required Schema Additions Referenced in the LDIF Data](#)
- [Task 4: Extending the Schema in Oracle Internet Directory](#)
- [Task 5: Removing Any Proprietary Directory Data from the LDIF File](#)
- [Task 6: Removing Operational Attributes from the LDIF File](#)
- [Task 7: Removing Incompatible userPassword Attribute Values from the LDIF File](#)

- [Task 8: Adding the Oracle Internet Directory Object Classes to the User and Event Calendar Entries](#)
- [Task 9: Running the bulkload.sh -check Mode and Determine Any Remaining Schema Violations or Duplication Errors \(Optional\)](#)
- [Task 10: Importing the Modified LDIF Files into the Oracle Internet Directory Server](#)
- [Task 11: Converting the Directory Entries from iPlanet to Oracle Internet Directory Format](#)

### **Task 1: Stopping Both the Servers**

Use the `unistop` utility to stop both the old standalone Oracle Calendar server and the new Oracle Collaboration Suite server.

### **Task 2: Exporting Directory Entries from the Netscape, iPlanet, or Sun ONE Directory Server into an LDIF File**

Use the `ldapsearch` command with the following syntax to export directory entries for resources:

```
ldapsearch -h iplanet_hostname -p iplanet_port -D manager_DN -w manager_DN_password -b baseDN "objectclass=ctcalresource" > users_LDIFfile
```

Use the `ldapsearch` command with the following syntax to export directory entries for users and event calendars:

```
ldapsearch -h iplanet_hostname -p iplanet_port -D manager_DN -w manager_DN_password -b baseDN "objectclass=inetorperson" > resources_LDIFfile
```

The entries in the resulting LDIF files should look similar to the following:

```
dn: uid=hmoore,ou=People, dc=ca,dc=oracle,dc=com
uid:hmoore
sn:Moore
cn:Henry Moore
objectclass:top
objectclass:person
objectclass:organizationalPerson
objectclass:inetorgperson
objectclass:ctCalUser
givenname:Henry
ctcalxitemid:00010:00259
ctcalpublishedtype:0
...
```

---

**Note:** With some older versions of `ldapsearch`, the line beginning `dn:` is not included in the file and all colons (`:`) are replaced by the equal to sign (`=`). In this case, modify the file so the user entries follow the same format as the example given.

---

### **Task 3: Analyzing the LDIF Files for Any Required Schema Additions Referenced in the LDIF Data**

This task is identical to "[Task 2: Analyzing the LDIF Files for Any Required Schema Additions Referenced in the LDIF Data](#)".

**Task 4: Extending the Schema in Oracle Internet Directory**

This task is identical to "[Task 3: Extending the Schema in Oracle Internet Directory](#)".

**Task 5: Removing Any Proprietary Directory Data from the LDIF File**

This task is identical to "[Task 4: Removing Any Proprietary Directory Data from the LDIF File](#)".

**Task 6: Removing Operational Attributes from the LDIF File**

This task is identical to "[Task 5: Removing Operational Attributes from the LDIF File](#)".

**Task 7: Removing Incompatible userPassword Attribute Values from the LDIF File**

This task is identical to "[Task 6: Removing Incompatible userPassword Attribute Values from the LDIF File](#)".

**Task 8: Adding the Oracle Internet Directory Object Classes to the User and Event Calendar Entries**

This task is identical to "[Task 7: Adding the Oracle Internet Directory Object Classes to the LDIF Files](#)".

**Task 9: Running the bulkload.sh -check Mode and Determine Any Remaining Schema Violations or Duplication Errors (Optional)**

This task is identical to "[Task 8: Running bulkload.sh to Find Any Remaining Schema Violations or Duplication Errors \(Optional\)](#)".

**Task 10: Importing the Modified LDIF Files into the Oracle Internet Directory Server**

This task is identical to "[Task 9: Importing the Modified LDIF Files into the Oracle Internet Directory Server](#)".

**Task 11: Converting the Directory Entries from iPlanet to Oracle Internet Directory Format**

Use the following command to convert the directory entries:

```
unioidconf -upgrade
```

You can safely ignore any warnings generated in the `unioidconf.log` file.

**Migrating the Calendar Database**

Migrating the Calendar database involves moving the Calendar nodes from the Netscape, iPlanet, or Sun ONE server to the Oracle Collaboration Suite server then reconfiguring the node network to recognize this change. This section describes the tasks required to complete this migration and reconfiguration. The tasks are:

- [Task 1: Moving the Database](#)
- [Task 2: Updating the Node Network Information on the New Server](#)

**Task 1: Moving the Database**

To move the Calendar database to Oracle Collaboration Suite:

1. On the new Calendar server rename the `$ORACLE_HOME/ocal/db` directory to `$ORACLE_HOME/ocal/db_blank`.

2. Copy the `$ORACLE_HOME/ocal/db` directory from the old standalone Calendar server to `$ORACLE_HOME/ocal/db` on the new Calendar server.

### **Task 2: Updating the Node Network Information on the New Server**

Copy the `$ORACLE_HOME/ocal/misc/nodes.ini` file from the old standalone Calendar server to `$ORACLE_HOME/misc/nodes.ini` on the new Calendar server.

If the hostname of the new server has changed, do the following on the new Calendar server:

1. Run the following command:

```
unidbfix -export -n all
```

This creates the `$ORACLE_HOME/ocal/db/nodes/N#/perm/remotenode.ini` file, where `N#` is the value of the `name` parameter in the `unison.ini` section corresponding to the target node.

2. Modify the generated `remotenode.ini` file. Replace the old hostname and port with the new hostname and port. The `remotenode.ini` should be modified for each and every node in the Calendar node network.
3. Update the host information with the following command:

```
unidbfix -import -n all
```

4. Modify the `$ORACLE_HOME/ocal/misc/nodes.ini` file. Replace the old hostname and port with the new hostname and port.
5. Start the new Calendar server.

The migration is now complete.



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# Migrating Calendar Data Using the iCalendar Representation

This chapter describes how to migrate calendar data using the iCalendar representation. The chapter contains the following sections:

- [iCalendar Objects](#)
- [The uniical Utility](#)
- [Representing Events in iCalendar Format](#)
- [ORGANIZER and ATTENDEE Properties](#)

## iCalendar Objects

The iCalendar standard is used to import and export data from any application that can generate iCalendar output. Using standard objects to represent meetings and events, you can use the `uniical` utility and Calendar SDK (CSDK) functions to create programs that read or write calendar data and store the information on the Oracle Calendar server. This implies that by using iCalendar objects, you can develop utilities to migrate calendar data. CSDK is a set of C/C++ and Java functions that allows users to create applications for Oracle Calendar.

The following is a sample iCalendar object:

```
BEGIN:VCALENDAR //must be used for START and END
METHOD:PUBLISH VERSION:2.0
PROPID:Oracle/Calendar
BEGIN:VEVENT
CLASS:PUBLIC
PRIORITY:5
STATUS:CONFIRMED
DTSTART:20030626T200000Z
DTEND:20030626T220000Z
SUMMARY: export //Subject(email) or action on object
UID:29b#400#177b5abc&0002Yy0yMjA4.. //Unique identifier
END:VEVENT
END:VCALENDAR
```

## The uniical Utility

In addition to the CSDK, the `uniical` utility can also be used for migrating data to applications that support the iCalendar representation. This utility uses the iCalendar format to represent the import and export of a calendar user's agenda. Using

uniical, you can perform various operations including import, export, and deletion of calendar data. The `export` option allows exporting calendar data into an iCalendar format, which can then be imported into a user's agenda in Oracle Calendar. Refer to ["Preparing for Migration Using the iCalendar Representation"](#) in Chapter 4, "Calendar Migration Planning" for information on the limitations of uniical.

## Importing and Exporting Events

When using uniical for import, each event from the iCalendar file is read and processed, and a status message is displayed on screen. Any error message is written to a log file. Each event can be either created or modified depending on the event UID. If no UID is found with the iCalendar event, a new event is created and the calendar server assigns it a UID. If a UID is found, you can either create an event with that UID (if no event exists with that UID) or modify the existing event with that UID.

When exporting an agenda with uniical, you can export all the events, the events that are in a certain date range, or the event that matches the specified UID.

---



---

**Note:** The UID referred here is the event UID, not a user UID. The events exported will depend on the access rights you have on the user's agenda.

---



---

When you export an agenda with uniical, both the meetings where you are the organizer and the meetings where you are only an attendee are exported. If you import an event with uniical, then you may or may not be the organizer of the event. The event may also have other attendees besides you.

Oracle Calendar has the concept of an internal attendee and an external attendee. An attendee is internal if he or she has an Oracle Calendar account. An external attendee does not have an Oracle Calendar account.

The uniical utility uses the meeting organizer field (an e-mail address) to determine whether the current user is the organizer of the event being imported. If the current user is the organizer of the event being imported, then the uniical utility, by default, uses the attendee's e-mail address to determine whether the attendee is external or internal, by searching the for an Oracle Calendar account matching the e-mail address.

Depending on the command-line options being used, and whether or not the user is the meeting organizer, attendees could be set as external or internal.

## uniical Options

You can select from the various options available with uniical, depending on your requirement. [Table 8-1](#) lists these options:

**Table 8-1** uniical Options

Options	Description
-h	Displays usage information.
-v	Displays version information.
-del	Deletes the specified events.
-import	Adds or modifies events.
-export	Exports events.
-process	Processes the methods in the iCalendar file.

**Table 8–1 (Cont.) unical Options**

Options	Description
-u	Specifies the user, resource, or event calendar whose agenda is modified. The user is specified using an X400-like syntax, such as with the <code>uniuser</code> utility. When managing holidays using <code>unical</code> , use the <code>-u</code> option with the <code>holiday</code> argument.
-host	Specifies the host and port on which the user's agenda, which is affected by the operation, resides.
-n	Specifies the node on which the user's agenda that is affected by the operation resides.
-neverresolvemail	Configures <code>unical</code> to never match the iCalendar attendee e-mail address to an existing Oracle Calendar user. All the attendees are considered as external attendees.
-alwaysresolvemail	Configures <code>unical</code> to match the iCalendar attendee e-mail address to an existing Oracle Calendar user, even if the user is not the organizer of the event. By default, the e-mail address is matched for all events that are organized by the user.
-stoponerror	Restricts <code>unical</code> to stop at the first error.
-organizer	Configures <code>unical</code> for the organizer e-mail address override. Normally, the current user e-mail address is used, but sometimes users may have several e-mail addresses. This option allows specifying an alternate e-mail address that corresponds to the user whose agenda is modified.
-f	Specifies the file that holds ( <code>-import</code> , <code>-process</code> , <code>-del</code> ) or will hold ( <code>-export</code> ) the iCalendar data.
-charset	Specifies the character set in which the iCalendar file is encoded.
-eventuid	Specifies the UID of the particular event to export.
-start	Configures the start date from which to export data.
-end	Configures the end date up to which to export data.
-uid	Specifies the user who logs in to the Calendar server. This user can be either the same user as the <code>-u</code> , or must have designate rights to the agenda of the user specified by the <code>-u</code> option. If not specified, the user needs to log in as <code>sysop</code> because <code>sysop</code> has designate rights to all agendas.
-p	Specifies a password of the <code>-uid</code> user. In the case where <code>-uid</code> is not specified, <code>-p</code> returns the <code>sysop</code> password.

## Representing Events in iCalendar Format

To better understand events in iCalendar format, consider the following example:

```

BEGIN:VCALENDAR
BEGIN:VEVENT
X-ORACLE-EVENTINSTANCE-GUID:I1+111106+391+1+437960403
X-ORACLE-EVENT-GUID:E1+111106+391+437960403
X-ORACLE-EVENTTYPE:APPOINTMENT
UID:20041116T234003Z-1b202-187-503f-Oracle
TRANSP:OPAQUE
SUMMARY:Stamp pasting
STATUS:CONFIRMED
SEQUENCE:0
PRIORITY:5
ORGANIZER;X-ORACLE-GUID=888877776666555544443332221111;
  CN=GERMAINE LAUZON:mailto:GERMAINE.LAUZON@LES-BELLE-SOEURS.QC.CA

```

```

LOCATION:My Montreal home
DESCRIPTION:Paste one million trading stamps
DTSTART:20041120T193000Z
DTEND:20041120T200000Z
CLASS:PUBLIC
ATTENDEE;X-ORACLE-GUID=888877776666555444433322221111;
  CUTYPE=INDIVIDUAL;CN=GERMAINE LAUZON;
  PARTSTAT=ACCEPTED:mailto:GERMAINE.LAUZON@LES-BELLES-SOEURS.QC.CA
ATTENDEE;X-ORACLE-GUID=AAAAAAAABBBBBBBCCCCCCCCDDDDDDDD;
  CUTYPE=INDIVIDUAL;CN=OLIVINE DUBUC;
  PARTSTAT=NEEDS-ACTION:mailto:OLIVINE.DUBUC@LES-BELLES-SOEURS.QC.CA
ATTENDEE;X-ORACLE-GUID=AAAA1111BBBB2222CCCC3333DDDD4444;
  CUTYPE=INDIVIDUAL;CN=LISE PAQUETTE;
  PARTSTAT=NEEDS-ACTION:mailto:LISE.PAQUETTE@LES-BELLES-SOEURS.QC.CA
END:VEVENT
END:VCALENDAR

```

In the earlier example:

- The organizer is Germaine Lauzon
- The three attendees are Germaine Lauzon, Olivine Dubuc, and Lise Paquette
- The title of the event is "Stamp pasting", the location is "My Montreal home", and the description is "Paste one million stamps"
- The meeting starts at 1930 UTC (coordinated universal time), November 20, 2004, and ends at 2000 UTC of the same day

---



---

**Note:** In the earlier example, indented lines belong to the preceding line. (The lines that start with ORGANIZER and ATTENDEE have been broken into several lines because of space restrictions within this document.)

---



---

If you are using the sample event as the input file for `unical`, importing into Germaine Lauzon's agenda, and ensuring that an event with the UID of this sample event does not exist in the Calendar server, then the `unical` utility will add this event to the Calendar server.

**See Also:** For additional information on iCalendar properties:

- RFC 2445: Internet Calendaring and Scheduling Core Object Specification (iCalendar)
- *Oracle Calendar Application Developer's Guide*

## Repeating Events

A repeating event is a collection of the event instances that does not follow any rule. The main event has one or multiple RDATE properties that identify additional instances belonging to the main event. These instances are represented as separate VEVENTs with the same UID as the main event, and the RECURRENCE-ID with a value that matches one RDATE value in the main event.

The following iCalendar formatted data represents a repeating meeting that occurs three times at 1630 UTC on November 27, 28, and 29, 2004:

```

BEGIN:VCALENDAR
BEGIN:VEVENT
X-ORACLE-EVENTINSTANCE-GUID:I1+111110+391+3+437971581

```

```

X-ORACLE-EVENT-GUID:E1+111110+391+437971581
X-ORACLE-EVENTTYPE:APPOINTMENT
UID:20041117T024620Z-1b206-187-3b4c-Oracle
SUMMARY:Repeating Meeting
RDATE:20041128T163000Z
RDATE:20041129T163000Z
ORGANIZER;X-ORACLE-GUID=888877776666555444433322221111;
  CN=GERMAINE LAUZON;mailto:GERMAINE.LAUZON@LES-BELLES-SOEURS.QC.CA
DTSTART:20041127T163000Z
DTSTAMP:20041117T024714Z
DTEND:20041127T170000Z
CREATED:20041117T024621Z
ATTENDEE;X-ORACLE-GUID=888877776666555444433322221111;
  CUTYPE=INDIVIDUAL;CN=GERMAINE LAUZON;
  PARTSTAT=ACCEPTED;mailto:GERMAINE.LAUZON@LES-BELLES-SOEURS.QC.CA
END:VEVENT

```

```

BEGIN:VEVENT
X-ORACLE-EVENTINSTANCE-GUID:I1+111110+391+2+437971581
X-ORACLE-EVENT-GUID:E1+111110+391+437971581
X-ORACLE-EVENTTYPE:APPOINTMENT
UID:20041117T024620Z-1b206-187-3b4c-Oracle
SUMMARY:Repeating Meeting
RECURRENCE-ID:20041128T163000Z
ORGANIZER;X-ORACLE-GUID=888877776666555444433322221111;
  CN=GERMAINE LAUZON;mailto:GERMAINE.LAUZON@LES-BELLES-SOEURS.QC.CA
DTSTART:20041128T163000Z
DTSTAMP:20041117T024714Z
DTEND:20041128T170000Z
CREATED:20041117T024621Z
ATTENDEE;X-ORACLE-GUID=888877776666555444433322221111;
  CUTYPE=INDIVIDUAL;CN=GERMAINE LAUZON;
  PARTSTAT=ACCEPTED;mailto:GERMAINE.LAUZON@LES-BELLES-SOEURS.QC.CA
END:VEVENT

```

```

BEGIN:VEVENT
X-ORACLE-EVENTINSTANCE-GUID:I1+111110+391+1+437971581
X-ORACLE-EVENT-GUID:E1+111110+391+437971581
X-ORACLE-EVENTTYPE:APPOINTMENT
UID:20041117T024620Z-1b206-187-3b4c-Oracle
SUMMARY:Repeating Meeting
RECURRENCE-ID:20041129T163000Z
ORGANIZER;X-ORACLE-GUID=888877776666555444433322221111;
  CN=GERMAINE LAUZON;mailto:GERMAINE.LAUZON@LES-BELLES-SOEURS.QC.CA
DTSTART:20041129T163000Z
DTSTAMP:20041117T024714Z
DTEND:20041129T170000Z
CREATED:20041117T024621Z
ATTENDEE;X-ORACLE-GUID=888877776666555444433322221111;
  CUTYPE=INDIVIDUAL;CN=GERMAINE LAUZON;
  PARTSTAT=ACCEPTED;mailto:GERMAINE.LAUZON@LES-BELLES-SOEURS.QC.CA
END:VEVENT
END:VCALENDAR

```

In the earlier example, notice that each event has the same UID. The first event, which occurs on the November 27, has two RDATE properties, one for each of the other two events. The last two events have a RECURRENCE-ID property that matches the DTSTART properties of the respective events.

## Recurring Events

A recurring event has a recurrence rule `RRULE` that specifies when meeting instances occur. Recurring events typically have one `VEVENT` for an event with multiple instances.

The following example shows how to create a recurring meeting using the `unical` utility. The meeting occurs daily from 1200 to 1330 EDT/EST.

```
BEGIN:VCALENDAR
VERSION:2.0
PROPID:Oracle/Oracle Calendar Server 10.1.1.0.1
BEGIN:VTIMEZONE
TZID:/ORACLE/OCAL/EST5EDT
BEGIN:DAYLIGHT
RRULE:FREQ=YEARLY;UNTIL=20750407T020000Z;BYMONTH=4;BYDAY=1SU
TZNAME:Eastern Standard Time\, Eastern Daylight Time
TZOFFSETTO:-0400
TZOFFSETFROM:-0500
DTSTART:19910401T020000
END:DAYLIGHT
BEGIN:STANDARD
RRULE:FREQ=YEARLY;UNTIL=20751031T020000Z;BYMONTH=10;BYDAY=-1SU
TZNAME:Eastern Standard Time\, Eastern Daylight Time
TZOFFSETTO:-0500
TZOFFSETFROM:-0400
DTSTART:19911025T020000
END:STANDARD
END:VTIMEZONE
BEGIN:VEVENT
UID:20050427T120000-Recurring
SUMMARY:Reccuring
RRULE:FREQ=DAILY;COUNT=2;INTERVAL=1;WKST=SU
DESCRIPTION:Details 0
DTSTART;TZID=/ORACLE/OCAL/EST5EDT:20050427T120000
DTEND;TZID=/ORACLE/OCAL/EST5EDT:20050427T133000
END:VEVENT
END:VCALENDAR
```

## Requirements for a Valid iCalendar Event

An event must have, at minimum, a `DTSTART` property and a `DTEND` or `DURATION` property, for `unical` to successfully import that event into the calendar server. The following is a sample event in iCalendar format that has the minimum amount of information required for a successful import by `unical`:

```
BEGIN:VCALENDAR
BEGIN:VEVENT
SUMMARY:My minimal event
DTSTART:20041120T103000Z
DTEND:20041120T113000Z
END:VEVENT
END:VCALENDAR
```

The Calendar server will automatically assign an organizer (the owner of the agenda in which you are importing the event) and a `UID`. In the earlier example, the `SUMMARY` property is optional. If you do not specify any summary text, then the default value, which is `UNTITLED`, would be used.

## ORGANIZER and ATTENDEE Properties

The organizer and attendee property has several parameters associated with it including the following:

- X-ORACLE-GUID: Each Calendar user is uniquely identified by this value
- CN: Common Name. Specifies the display name of the Calendar user
- PARTSTAT: Participation status. The possible values of this attribute include the following:
  - NEEDS-ACTION: The Calendar user has not specified his or her participation status
  - ACCEPTED: The Calendar user has accepted to attend the event
  - DECLINED: The Calendar user has declined to attend the event

A list of parameters, separated by semicolons, follow the ORGANIZER and ATTENDEE properties. At the end of this list, a mailto URI must appear; it must be separated from the list by a colon. The following is an example of an ATTENDEE property in iCalendar format:

```
ATTENDEE;X-ORACLE-GUID=88887777666655554444333322221111;
CUTYPE=INDIVIDUAL;CN=GERMAINE LAUZON;
PARTSTAT=ACCEPTED:mailto:GERMAINE.LAUZON@LES-BELLES-SOEURS.QC.CA
```

## Reading and Modifying Events

The organizer may read and modify any property of the event with which it is associated. However, the organizer has some restrictions in regards to an attendee's properties. An organizer may not change the PARTSTAT property of an attendee. An organizer may add or delete an attendee.

## Importing Events and ORGANIZER Property

Suppose we want to import Germaine Lauzon's events into an agenda of a new Calendar user. Import only those events for which Germaine Lauzon is the organizer. Do not import any events in Germaine Lauzon's old agenda in which she is not the organizer.

Events are shared entities in Oracle Calendar. For example, if we import the previous sample event ("Stamp pasting"), then the same event will appear in Germaine Lauzon, Olivine Dubuc, and Lise Paquette's agendas. Germaine will be the organizer of the event; she will be the only one able to modify the event. Olivine and Lise will be able to see the event, but cannot modify it.

When you import any event into a particular Calendar user's agenda, the ORGANIZER property will be set to that user's agenda, regardless of the value of ORGANIZER. For example, if you import the previous sample event into Olivine Dubuc's agenda, the Calendar server will create a new event with Olivine Dubuc as the organizer.

Therefore, only import those events whose organizer is the same as the agenda owner's.

## The PARTSTAT Parameter

When you create an event with internal attendees, the PARTSTAT parameter of the event owner is set to ACCEPTED, and the PARTSTAT parameter of the other internal

attendees are set to `NEEDS-ACTION`. The Oracle Calendar server does not retain the original setting of `PARTSTAT`. In addition, the owner of an event cannot change the internal attendee's `PARTSTAT`. So, the Oracle Calendar server sets `PARTSTAT` to the default value, `NEEDS-ACTION`. This happens regardless of whether you authenticate as a user or `sysop`.

To set an internal attendee's `PARTSTAT`, you need to modify (re-import) the event while authenticating as `sysop`. Only event modification with `sysop` credentials enables you to modify `PARTSTAT` of an internal attendee. Event modification with owner or designate user credentials will ignore `PARTSTAT` of an internal attendee. Remember that events are identified by their `UIDs`, and to modify an event, you must have a correct event `UID` in your iCalendar data.

Another way to set `PARTSTAT` outside an Oracle Calendar client is to use the `CSDK_SetIdentity C` function or the `oracle.calendar.sdk.Session.setIdentity` Java method from the Calendar SDK.

**See Also:** *Oracle Calendar Application Developer's Guide* or the Calendar SDK JavaDoc for more information.



# Part IV

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## Migration to Oracle Content Services

This part provides information about the migration tasks and tools related to Oracle Content Services.

Part IV contains the following chapters:

- [Chapter 9, "Migrating Content to Oracle Content Services"](#)



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# Migrating Content to Oracle Content Services

This chapter provides information about how to migrate content and users from legacy systems to Oracle Content Services.

This chapter contains the following sections:

- [Migrating Data from Other File Systems](#)
- [Oracle Content Services Command-line Tools](#)

## Migrating Data from Other File Systems

Oracle Content Services migration is applicable to customers migrating from the following systems:

- Oracle Content Management SDK
- Third party applications, such as Novell

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**Note:** Oracle Content Services does not currently offer a migration toolkit. You must migrate your files manually.

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## Migration Tasks

Consolidating users, folder hierarchy, content, and access privileges from other file server systems to Oracle Content Services involves the following tasks:

- [Migrating Oracle Content Services Users](#): You need to move the user list from the old file system to the new one. In other words, you need to re-create each user in Oracle Content Services (by creating users in Oracle Internet Directory).
- [Creating Oracle Content Services Libraries](#): If you have folders grouped into logical structures with specific security, you can create corresponding Libraries in Oracle Content Services with the same membership and Access Control Lists (ACLs).
- [Migrating Oracle Content Services Content](#): You must copy the actual files and folders from the old system to the new one.

## Migrating Oracle Content Services Users

The first task in moving to a new Oracle Content Services server is creating the user list. For each user you want to migrate to Oracle Content Services, create a user in Oracle Internet Directory.

**See Also:** *Oracle Internet Directory Administrator's Guide* for more information.

After users have been created in Oracle Internet Directory, they are automatically provisioned in Oracle Content Services by Oracle Internet Directory Credential Manager Agent.

Also, once a user has been created in Oracle Internet Directory, logging in to Oracle Content Services as that user immediately provisions the user in Oracle Content Services.

## Creating Oracle Content Services Libraries

To migrate user groups into Oracle Content Services, you must create or update corresponding Libraries and member roles in Oracle Content Services.

### Scripted Library Creation

If your management tools let you export group information to a file, you can write a translation script to convert the groups into XML format. Then, you can use the Library Creation tool to create corresponding Libraries in Oracle Content Services.

**See Also:** "[Oracle Content Services Command-line Tools](#)" for more information about the Library Creation tool.

## Migrating Oracle Content Services Content

After creating users and Libraries, the next step is to move files and folders into Oracle Content Services. However, if your old file system had application-specific metadata, this information cannot be automatically copied.

### Protocols for Copying Data

Use one of the following network protocols to copy your files:

- **File Transfer Protocol (FTP/FTPS):** FTP is the most lightweight protocol and can move large amount of data faster than any other protocols. For bulk operations, such as migrating from an existing system, FTP is the preferred protocol. You need to use either a command line FTP application or a Graphical User Interface (GUI) FTP client for this. As an alternative, you can use FTPS. FTPS is FTP with the added option of Secure Socket Layer (SSL) security.

To FTP your files into Oracle Content Services, the following requirements must be met:

- An FTP client must be installed on your local computer.

You must know the port number for FTP. The default port number is 21. Use the Oracle Collaboration Suite Control to check the `IFS.SERVER.PROTOCOL.FTP.Port` property if you are unsure.

- An account on the Oracle Content Services server must be already set up.

To FTP your files into Oracle Content Services:

1. Using an FTP client, log on to the Oracle Content Services server. You can use either the hostname of the Oracle Content Services server or the IP address of the server.
2. Navigate to the files on your local computer that you want to load into Oracle Content Services and use the utilities of your FTP client to load the files.

By default, to use FTP, you require an FTP password. Set this password from the User Preferences page in Oracle Content Services.

- **Web-based Distributed Authoring and Versioning (WebDAV):** WebDAV, a protocol designed for Internet and intranet collaboration on files, enables you to drag and drop data from one system to another.

**See Also:** Oracle Content Services online help for more information

In Windows:

1. Connect to a Web folder.
2. Select the files from your local directory.
3. Drag and drop the files into a folder in the Oracle Content Services Web folder.

If you want to retain the file structure, click and drag the entire directory structure from the original file system into Oracle Content Services, or drag different parts of the directory tree separately, confirming that each part of the tree has been copied before copying the next one.

4. Log on to Oracle Content Services through Windows as a test user and verify that all the files and folders are accessible.

**Oracle Drive:** Oracle Drive is a desktop client that uses the WebDAV protocol to access Oracle Content Services. After it is installed, Oracle Drive appears as a mapped drive in your Windows Explorer. Oracle Drive also provides file synchronization capabilities between your local computer and Oracle Content Services.

## Oracle Content Services Command-line Tools

You can use the command-line tools to create and modify groups and Libraries.

Each tool works in a similar manner: it reads an XML file containing a list of actions (such as creating a Library or updating users), processes the list, and performs the actions.

To run the command-line tools, you must have appropriate privileges and access to the command-line on the server where Oracle Content Services is running.

This section includes the following topics:

- [Running the Oracle Content Services Command-line Tools](#)
- [Using the Oracle Content Services Group Tool](#)
- [Using the Oracle Content Services Library Tool](#)

## Running the Oracle Content Services Command-line Tools

The command-line tools run over the Oracle Content Services Web services.

To run the command-line tools, perform the following steps:

1. Download and extract the Oracle Content Services Web Services Development Kit to your computer. You can obtain the Oracle Content Services Web Services Development Kit from the Oracle Technology Network (OTN) at <http://www.oracle.com/technology>.

The `ContentServices_WebServices/command_line_tools` directory of the Development Kit includes scripts and configuration files that you can use to set up and run the Oracle Content Services command-line tools.

2. If you are not using HTTPS, change the `IFS.DOMAIN.WS.ClearTextAuthenticationRequiresHttps` domain property to `false`. Otherwise, you will not be able to use the command-line tools. See *Oracle Content Services Administrator's Guide* for information about how to set domain properties.
3. Set up your environment:
  - Install JDK 1.4 on your computer.
  - Set the `JAVA_HOME` environment variable. `JAVA_HOME` is required to use the `javac` and `java` executables for running the command-line tools program.
4. Create an XML file for group or Library creation that complies with the respective XML Schema Definition (XSD) file. Specify command-line operations for groups and Libraries in separate XML files. For each command-line tools operation, you can use only one operation type at a time, which is either `create` or `modify`. The XSD files for groups and Libraries are stored in the `conf` directory under your command-line tools home directory.
5. Set up property files by editing the sample property file, `property.txt`. You can find this file in the `ContentServices_WebServices/command_line_tools/examples` directory. Provide values for the following properties:
  - **operation:** group or workspace
  - **xmlfile:** name of the XML file
  - **xmlpath:** location of the XML file
  - **username:** name of the Oracle Content Services user
  - **url:** use the format `http://hostname:port/content/ws`
6. Run the command-line tools program.
  - For Linux or Solaris, run the following shell script:

```
sh runbulktools.sh property_file
```

For example:

```
sh runbulktools.sh /private/bulktools/property.txt
```
  - For Windows, run the following batch file:

```
runbulktools.bat property_file
```

For example:

```
runbulktools.bat C:\property.txt
```
7. When prompted, provide the Oracle Content Services password of the user specified in the property file.

If an operation fails, an error message is shown. The program continues to the next operation until the entire list is processed. All exception stack traces and details are logged in the `Bulk-log.log` file, located in the `ContentServices_WebServices/command_line_tools/log` directory.

## Using the Oracle Content Services Group Tool

The Group tool uses an XML file that provides the name, description, and members of a group that have User or Manager role. The Group tool performs the following within a Site:

- **Create groups:** Create groups provides a mechanism for bulk group creation. Group details such as name (mandatory), description, and members are taken from the XML file, and are validated against the existing schema. If the validation fails, for example, if the group already exists, the operation is terminated and an appropriate error message is reported based on command line interface (CLI) property file options.

In addition, member names can be provided through a separate file for each group member's role. This file contains the list of members separated by new line characters.

- **Modify groups:** Modify groups provides a mechanism for bulk group modification. Group details such as name (mandatory), description, and members are taken from the XML file, and are validated against the existing schema. If the validation fails—for example, because the group does not exist—the operation is terminated and an appropriate error message is reported based on CLI property file options.

In addition, member names can be provided through a separate file for each Library member's role. This file contains the list of members separated by new line characters. The modify operation can be performed by a Site administrator or group managers.

### Sample XML File for Group Creation

```
<groups>

  <create>

    <group name="IDCTest10">

      <member name="ken" role="manager"/>

      <member name="steve" role="user"/>

    </group>

  </create>

</groups>
```

### Sample Property File for Groups

```
operation=group

xmlfile=group.xml

xmlpath=C:\bulktool

username=tim

url=http://sampleserver.domain.com:7777/content/ws
```

## Using the Oracle Content Services Library Tool

The Library tool uses an XML file that provides the name, description, quota, path, and members of the Library that have Viewer, Author, or Manager role. The Library tool performs the following within a Site:

- **Create Libraries:** Create Libraries provides a mechanism for bulk Library creation. Library details such as name (mandatory), description, quota, path, and members are taken from the XML file, and are validated against the existing schema. If the validation fails, for example, if the Library already exists, the operation is terminated and an appropriate error message is reported based on CLI property file options.

The user who creates the Library automatically assumes the Administrator role for the Library. If optional parameters are not provided, these parameters are given default values.

In addition, member names can be provided through a separate file for each Library member's role. This file contains the list of members separated by new line characters.

- **Modify Libraries:** Modify Libraries provides a mechanism for bulk Library modification. Library details such as name (mandatory), description, quota, path, and members are taken from the XML file, and are validated against the existing schema. If the validation fails, for example, because the Library does not exist, then the operation is terminated and an appropriate error message is reported based on CLI property file options.

In addition, member names can be provided through a separate file for each Library member's role. This file contains the list of members separated by new line characters.

### Sample XML File for Library Creation

```
<workspaces>

  <create>

    <workspace name="A7" description="test">

      <member name="A" role="reader"/>

      <member name="B" role="reader"/>

    </workspace>

  </create>

</workspaces>
```

### Sample Property File for Libraries

```
operation=workspace

xmlfile=workspace.xml

xmlpath=C:\bulktool

username=tim

url=http://sampleserver.domain.com:7777/content/ws
```



# Part V

---

## Coexistence

This part provides information about Oracle Collaboration Suite Mail and Oracle Collaboration Suite Calendar coexisting with other e-mail and calendar systems.

Part IV contains the following chapters:

- [Chapter 10, "Coexistence with Other E-mail Systems"](#)
- [Chapter 11, "Coexistence with Other Calendar Systems"](#)
- [Chapter 12, "Coexistence with Oracle Oracle Messenger"](#)



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## Coexistence with Other E-mail Systems

As part of migration to Oracle Collaboration Suite, there may be a requirement to have a few users on the existing mail server and some on Oracle Collaboration Suite without any loss of service to any user. Mails from the Internet should be delivered to users on both Oracle Collaboration Suite and the existing mail server. Users on the existing mail server should be able to send and receive e-mail to the ones migrated to Oracle Collaboration Suite, and vice versa.

To have the source e-mail system and Oracle Collaboration Suite coexist, you should enable routing in the Mail Migration Options screen of Oracle Collaboration Suite Email Migration Tool. In addition, perform the following steps using the Oracle Enterprise Manager console:

1. Set the `orclMailSMTPRecipientRewritingRules` attribute in Oracle Internet Directory using Oracle Enterprise Manager to `*$@target_smtp_host $1@target_domain`

where, `target_smtp_host` and `target_domain` are the target SMTP host and the target domain entered in the Mail Services screen of the migration setup wizard respectively.

2. In case of collapsing domains, set the recipient rewriting rule as `*$@source_domain $1@target_domain`

where, `source_domain` and `target_domain` are the source domain and target domain entered in the Mail Services screen of the migration setup wizard respectively. For example:

`*$@mktg.acme.com $1@acme.com` and `*$@admn.acme.com $1@acme.com`

3. Set the attribute `orclMailProcessFlag` in the Oracle Internet Directory using Oracle Enterprise Manager with the value `-1` (minus el).
4. Disable the anti-spam check during the duration of the migration.
5. Ensure that `orclMailSMTPRelay` is set to either the name of the source e-mail system or the address of MX record for source domain. It is probably safest to set this for `SMTP_IN` and `SMTP_OUT`.
6. Restart `SMTP_IN` and `SMTP_OUT`.



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## Coexistence with Other Calendar Systems

This chapter describes the scenarios for coexistence with other calendar systems. The chapter contains the following sections:

- [Introducing Coexistence](#)
- [Oracle Calendar Coexistence Scenarios](#)
- [Coexistence with Microsoft Exchange](#)
- [Collaborating with Other Migrated Users](#)
- [Collaborating With Users Still Using Exchange](#)
- [Other Differences Between Oracle Connector for Outlook and Microsoft Outlook](#)
- [Other Services Available With OCFO](#)

### Introducing Coexistence

Coexistence allows a planned migration from a legacy system to Oracle Calendar. However, implementing coexistence for a calendaring system is a complex task. This is because calendar systems are typically proprietary and are often built on top of the e-mail application of the vendor. Standards are still evolving and, therefore, cannot comply with the varying levels of support from major calendar application vendors.

The iCalendar standard provides a solution to this, especially in case of attendees who use other calendaring systems that support iCalendar. They can directly import calendar data stored in the iCalendar file format into Oracle Calendar.

### Oracle Calendar Coexistence Scenarios

When Oracle Calendar coexists with an existing calendar system, two scenarios must be considered. First, the sending and receiving of meeting invitations across systems. Oracle Calendar supports the standard representation for calendar objects that can be processed by other scheduling clients, such as Microsoft Outlook and Netscape. The iCalendar standard only supports sending and receiving the object representation of the appointment, usually as an attachment to an e-mail, but it does not specify how to bind the appointment to a user's schedule. iMip and iTip are two emerging standards to support this functionality. Second, the *free/busy* lookup between computers might be required. The Microsoft Outlook client provides the ability to publish *free/busy* time to an FTP server. For the migration of Microsoft Outlook clients to Oracle Connector for Outlook, the coexistence functionality can enable *free/busy* interoperability.

## Coexistence with Microsoft Exchange

If your organization has recently undergone a migration from Microsoft Exchange to Oracle Collaboration Suite, and you and your colleagues are now split between Microsoft Exchange and Oracle Collaboration Suite, this chapter is for you. It covers the continued use of the Outlook client within the new Oracle environment, as well as the issues users can encounter when collaborating through Outlook in an organization where Microsoft Exchange and Oracle Collaboration Suite must coexist for any period of time.

Although Outlook is still the common client interface to your messaging and calendar information, you are now collaborating with users who are working in two different proprietary environments. As this guide describes, Outlook supports common functionality, and there are standards which dictate the way a meeting or attachment is sent between groups of users. However, in the same way you may have noticed odd behavior or occasional errors when working with partners, customers or acquaintances completely outside of your office environment, you will now be faced with the same challenges within your organization.

The important concept to understand is that you can continue to accomplish your important tasks through Outlook. However, you may have to adjust the way you use the software to accommodate anyone who is not using the same system during the period of coexistence.

After the entire organization has been migrated to Oracle Collaboration Suite, these issues will no longer exist and you will be able to take full advantage of the new features and added benefits Oracle has to offer in their collaborative applications.

This section answers a number of frequently asked questions about coexistence with Microsoft Exchange. The section contains the following:

- [How Am I Affected by the Migration?](#)
- [How Are the Users Who Have Not Been Migrated Affected?](#)
- [What Functionality is Maintained?](#)
- [What Functionality is Lost?](#)
- [Am I Still Using Outlook?](#)

### How Am I Affected by the Migration?

As part of the migration process, the changes made at the server, network, and local PC levels, ensure that you are in a state of coexistence with other users who are still running Microsoft Exchange.

Coexistence of two different systems in the same organization causes side effects such as loss of functionality and integration of services. Although most of these issues simply require some understanding of the Outlook client. Because these are two different systems from two different vendors, the issues encountered are mostly related to the implementation of each vendor, and where their functionality and features meet when both are running in the same environment.

When your e-mail and calendar data was migrated from Microsoft Exchange to Oracle Collaboration Suite, all the data you previously accessed using Microsoft Outlook should still be available. If you notice any data loss, please contact your Help Desk. The following items are migrated from your Exchange profile:

- Calendar
- Contacts

- Inbox
- Journal
- Notes
- Sent Items
- Tasks

There may be some exceptions to this. For example, if you keep any data in Personal Folders, which are actually stored on your PC, and not on Exchange, then the data is not transferred during the migration. You can, however, retrieve this information. Again, you should contact your Help Desk if you do not know how to proceed.

## How Are the Users Who Have Not Been Migrated Affected?

As your organization rolls out Oracle Calendar in a staged fashion, you should be in a period of transition and some of the colleagues with whom you have scheduled meetings may remain on the Exchange system for some time.

There will be some loss of ownership with these meetings. As you are migrated, all the data you own is shifted to the new system. However, if you are an invitee to a meeting whose creator has not been migrated, then that meeting remains on their calendar, and you will only bring a copy of that information with you. There will be some data loss in these situations. Now you are considered an *external* or *foreign* user to Microsoft Exchange.

Since users still on Exchange do not have accounts on Oracle Calendar, they cannot access meetings directly, or see your availability (free or busy information). This also affects the ability to respond to meetings (accept, tentative, or decline).

Some examples of data inconsistency after migration include:

- Attendees may no longer appear in the meeting entry.
- Links to the booked conference room have disappeared.
- Updates to attendees still appearing in the meeting are no longer possible.

## What Functionality is Maintained?

The following functionality is still supported when scheduling between systems:

- Meeting organizer
- Meeting title
- Meeting location
- Meeting details (description)
- Send and Receive e-mail notification of the meeting (with Calendar attachment)

## What Functionality is Lost?

The following meeting attributes are not supported when scheduling between Oracle Calendar and Microsoft Exchange:

- Other meeting attendees
- The ability to respond to the meeting (accept, tentative, or decline)
- Free or busy information for both you and the organizers

This means that a meeting sent to a user not yet migrated will not allow for a response, nor will any updates made by the meeting creator modify the copy the external user has received. However, if updates are made, mail notifications will be sent.

## Am I Still Using Outlook?

Yes you would still be using Outlook as the desktop application for Oracle Mail and Calendar with minimal changes to the interface (except for some additional Oracle Calendar options). You will also see some additional features with Oracle Calendar as well as unsupported Outlook features, as they were specific to Microsoft Exchange.

## Collaborating with Other Migrated Users

If you are scheduling meetings with other users who are migrated, then you use real-time scheduling capabilities of Oracle Calendar. This is because everyone who is migrated uses Oracle Connector for Outlook and connects to the Outlook data store for their information. This means that you are using Oracle Calendar to schedule and update meetings, receive invitations, respond to meeting invitations, and book appropriate resources, such as conference rooms and projectors.

## Scheduling Meetings

Oracle Connector for Outlook offers the same functionality as Outlook for the purposes of scheduling meetings and booking resources, with the added benefit of instant schedule updates. Instead of requesting attendance over e-mail, you need to create a meeting on the Oracle calendar server, and recipients can respond appropriately.

Your availability, as well as the availability of all other migrated users, is always up-to-date and does not need to be published to others. All calendar information is accessed directly from the Oracle Calendar server through Outlook.

## Oracle Calendar Resources

Resources may be set up to work on a first-come, first-served basis, or a user can be assigned delegate rights to control booking. If you require delegate access to a resource account, contact your Help Desk.

## Planning a Meeting Without Conflicts

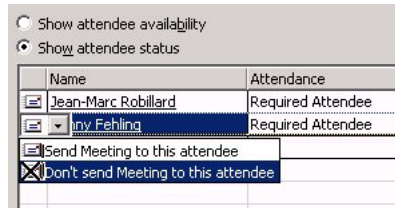
You can use the built-in functionality of Outlook with real-time calendar data to plan a meeting with a resource or group. There are two methods to plan a meeting without conflicts.

### First Method

To plan a meeting without conflicts:

1. Click **File, New**, and then **Meeting Request**.
2. Select the users and resources you want to invite to the meeting.
3. Select the **Attendee Availability** tab.
4. Select **Show attendee availability**.
5. If there is a conflict for an invitee, you can remove the user by clicking the Mail icon to the left of the user's name and selecting **Don't send meeting to this attendee**; or, you can select another time for the meeting.





### Second Method

You can also plan a meeting as follows:

1. Click **Actions** and then click **Plan a meeting**.
2. Add names to the attendee list and view the free/busy information as it is loaded. The proposed meeting time lies between the green and burgundy lines, and the combined schedule is shown as Busy time. Review the legend at the bottom of the Plan a Meeting dialog.
3. If there is a conflict, click **Auto Pick** in the bottom-left portion of the Plan a Meeting dialog. This allows the system to determine the next available free time based on your criteria.
4. Use the forward and backward arrow buttons to navigate forward or backward to the next available time slot for the meeting duration.
5. To create the meeting, click **Make Meeting**.

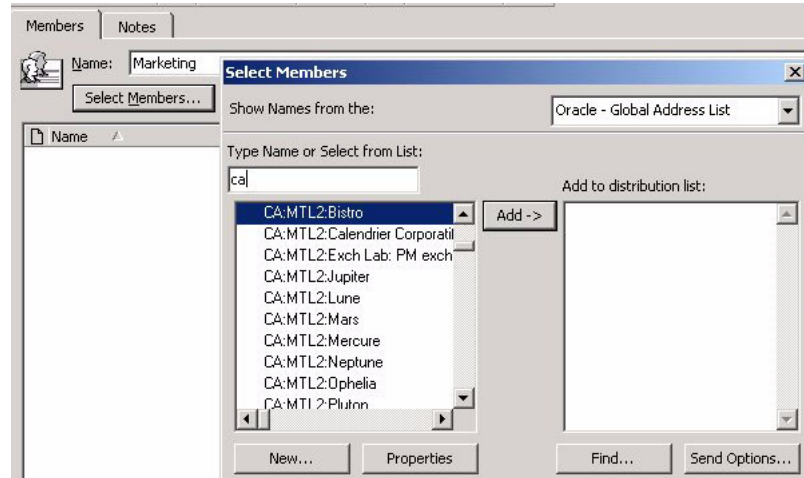
### Working With Distribution Lists

You may have previously set up groups of users with whom you work regularly. In such situations, it is easy and convenient to create meetings with multiple attendees without having to add each name individually.

You can use existing distribution lists on the Oracle Directory Server (select them from the drop-down list of users) or create your own if the available groups do not suit your needs.

To create a distribution list:

1. Click **File, New**, and then **Distribution List**.
2. Enter a name for the distribution list.
3. Add the necessary members.



4. To create the distribution list, click **Update Now**.

---

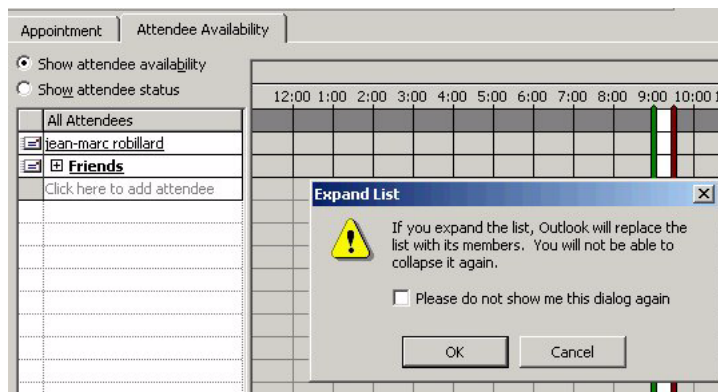
**Note:** If you create distribution lists that include external users, these users will still only receive meeting invitations in the form of e-mails or e-mail attachments.

---

### Using a Distribution List to Create a Meeting

You can use distribution lists for scheduling meetings in much the same way as you use them for sending e-mail.

1. Select the **Contacts** folder.
2. Right-click the distribution list you want to invite to the meeting and select **New Meeting Request to Contact**.
3. Enter the appropriate information for the meeting.
4. Outlook provides the option to expand the distribution list so you can view all members. To do so, select the **Attendee Availability** tab and click the plus sign (+) next to the name of the distribution list.



## Why Do I Receive Two Notifications When I Am Invited to a Meeting?

Oracle Connector for Outlook includes many user options that can be selected from Oracle menus within Outlook.

If the meeting organizer selects to send an e-mail notification to attendees when a meeting is created or updated, then the attendees receive an e-mail notification, as well as a meeting item in their Outlook Inbox.

This option may seem unnecessary because Outlook Inbox displays both, the meeting invitation and the e-mail notification. This resembles a duplicate notification to users invited to the meeting.

To disable the option of sending two notifications:

1. Click **Tools** and then click **Options**.
2. Click the **Oracle Connector** tab.
3. Click **Calendar Options**.
4. Click **Settings** from the **Notifications** section of the Calendar Options dialog.
5. Deselect the **Send e-mail notification to attendees when a meeting is created or updated** check box.



## Collaborating With Users Still Using Exchange

If you create meetings with users that have not yet migrated or collaborated with outside users (external attendees to meetings, identified by a full e-mail address, or selected from your personal address book, rather than the corporate directory), then you need to rely on e-mail messages, and in some cases, depending on the version of Outlook, calendar attachments to those e-mails.

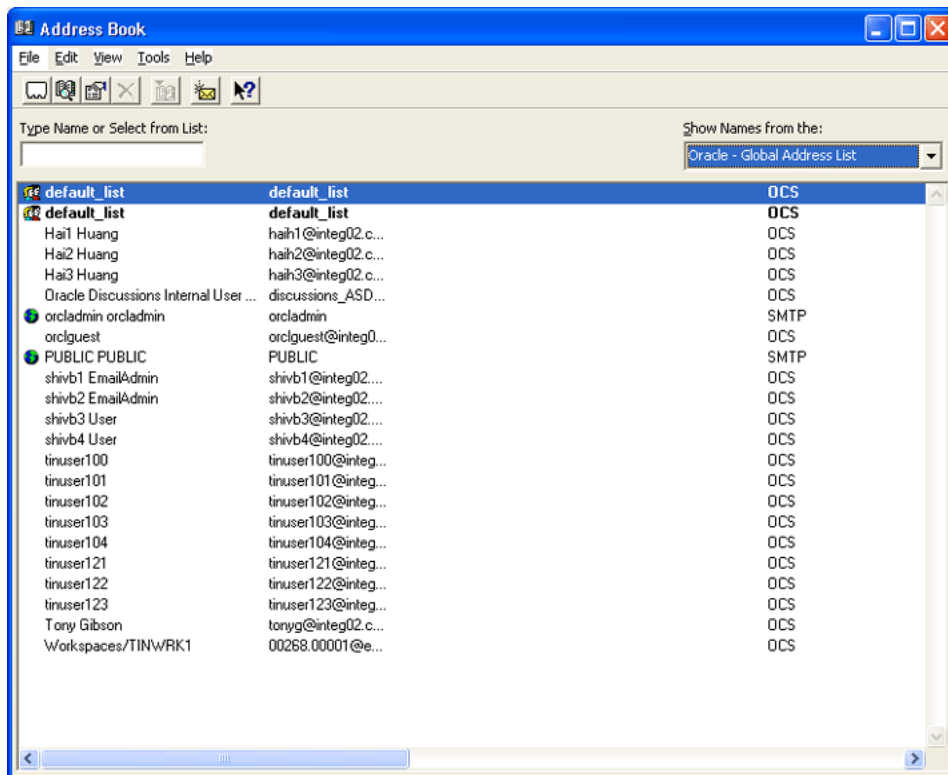
This section deals with collaborating with the Exchange users. The section contains the following:

- [How to Invite External Users to a Meeting?](#)
- [How Can I Make Sure to Send Calendar Information To External Users?](#)
- [How Do I Handle Meeting Requests that I Receive from External Users?](#)
- [Why Do I Encounter Errors When I Receive Invitations from External Users?](#)
- [What Are External Microsoft Outlook/Exchange Users Experiencing?](#)

## How to Invite External Users to a Meeting?

To invite external users to a meeting:

1. Create a meeting request.
2. In the To: field in the meeting request dialog, enter the e-mail address of the external user. Alternatively, you can select a non-Calendar user or resource from the address book. The user or resource can be visually identified by the icon of a Globe beside the user name.



If any users or resources you are inviting to the meeting have accounts on the Oracle Collaboration Suite Calendar system, they will *not* be considered *external attendees*. The external users will receive an e-mail notifying them of the meeting. They will also be identified as e-mail users in the meeting Attendee Availability window.

### What Does the Calendar Attachment Represent to the Recipient?

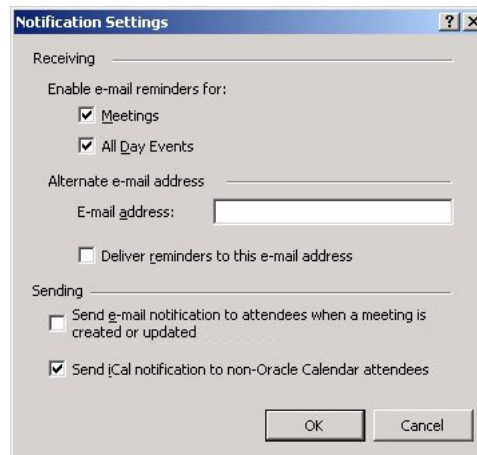
Oracle has built-in support for the Internet Calendar convention (iCal), which allows for an attachment to be sent over mail with a representation of the meeting. However, the level of collaboration is now limited, because the meeting attachment being sent is merely a copy of the original.

## How Can I Make Sure to Send Calendar Information To External Users?

The following steps ensure that you are automatically sending the iCal attachment to any invitee who is not an Oracle Calendar user:

1. Click **Tools** and then click **Options**.
2. Click the **Oracle Connector** tab.

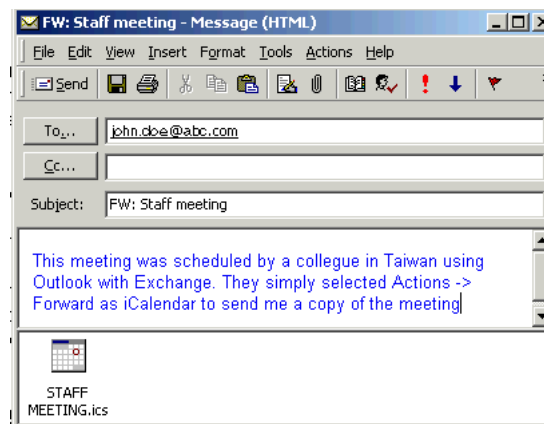
3. Click **Calendar Options**.
4. Click **Settings** from the **Notifications** section of the Calendar Options dialog.
5. Select the **Send iCal notification to non-Oracle Calendar attendees** check box.



## How Do I Handle Meeting Requests that I Receive from External Users?

If you are in contact with the sender of the meeting invitation, you might suggest that they try the following procedure, which will ensure that a standard calendar attachment is created and sent to you:

1. Open the meeting invitation after creation (double-click it in the Calendar view).
2. Click **Actions** and then click **Forward as iCalendar**.
3. Address the resulting message to the person you want to invite.



The preceding procedure forwards a read-only copy of the original meeting, but it also creates a format that is a standard iCal representation of the meeting that the invitee (whether using Outlook with Exchange or Oracle Collaboration Suite) will receive as an attachment and can be saved in their local Outlook client.

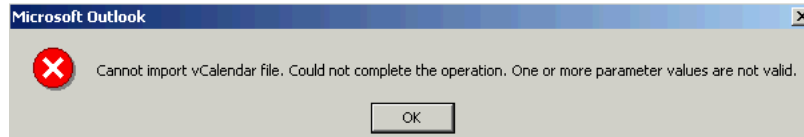
This copy of the meeting will not allow for a direct response (accept, decline, or tentative), and will indicate that the invitee is the Organizer. This is because it is a copy of the original meeting, and once received, is owned by the invitee locally.

These extra steps are only necessary because both Exchange and Oracle Collaboration Suite are being used in the same company, and collaboration through scheduling must now be supported across two systems.

## Why Do I Encounter Errors When I Receive Invitations from External Users?

Depending on which version of Outlook the sender is using, you may experience one of the following:

- An error opening the meeting attachment



- Duplicate attachments
- Winmail.dat attachments, which cannot be opened
- Other inconsistent behavior

To avoid missed meetings and confusion that may arise from updated meetings, which are not updated for migrated users, Microsoft Exchange users should try to indicate any changes or updates to meetings by using the **Forward as iCalendar** option, or by using the **Forward** option to supply the recipient with an e-mail (right-click any meeting to get the **Forward** option).

## What Are External Microsoft Outlook/Exchange Users Experiencing?

Outlook or Exchange users who schedule with each other expect only to see a view in their **Attendee Availability** meeting tab that includes the names and attendance role of every invitee.

Unlike Outlook with Oracle Calendar, it does not provide a real-time indication of the actual attendance status (accepted, declined, or tentative).

If you have been migrated to Oracle Collaboration Suite, you are no longer sending back your response to the meeting organizer using Microsoft Exchange. When you receive invitations from these external users, a number of scenarios are possible:

- You receive only an e-mail message without the possibility of response (accept or decline).
- You receive an e-mail with an attachment of type \*.ics (Internet calendar standard). This can be accepted or declined, but the sender will not be notified.
- You receive an e-mail with an attachment, but it cannot be processed.

When external users send you an invitation, they might be using a number of different options Exchange offers, including proprietary encoding and attachments that are not recognized by Oracle.

## Other Differences Between Oracle Connector for Outlook and Microsoft Outlook

Although the Outlook interface is mostly unchanged, there are some differences that you should know. Some of the Microsoft Outlook or Exchange features which are currently unsupported are described in this section.

The section contains the following:

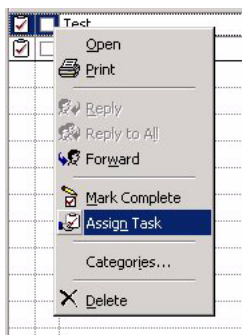
- [Is it Possible to Delegate Tasks?](#)
- [Why Do I Not Receive My E-Mail Instantly?](#)
- [How Do I Search the E-Mail Message Body?](#)

### Is it Possible to Delegate Tasks?

Delegated tasks are not supported with this version of Oracle Connector for Outlook (OCFO). However, it is still possible to forward a task to another user, assigning the task through e-mail.

To assign a task to another user:

1. Create a task in the Outlook Calendar.
2. Right-click the task and then click **Assign Task**.



The delegated task will be sent to the selected user's Inbox.

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**Note:** Recurring tasks are not supported in this release of OCFO (the Recurring menu is disabled). Therefore, when you create a task you must make sure that it spans the appropriate amount of time.

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### Why Do I Not Receive My E-Mail Instantly?

Microsoft Outlook with Exchange offers a mechanism that immediately pushes each individual e-mail to the Outlook Inbox. Oracle Collaboration Suite uses an IMAP mail standard to check for mail every few minutes (depending on how the system administrator sets this up) on the server.

However, you can instantly receive new mails by switching from one folder to another or refreshing the client using the **Send/Receive** button. This will override this setting and immediately check for the latest mail.

## How Do I Search the E-Mail Message Body?

Click **Find** and then click **Advanced Find** to select the fields you want to search in your messages.

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**Note:** This issue is applicable to Outlook 2000 only.

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## Other Services Available With OCFO

This section describes some of the other Outlook services that are available with OCFO. The section contains the following:

- [Contacts and Address Books](#)
- [Personal Folders](#)

### Contacts and Address Books

Contacts you previously stored in Outlook and Exchange were transferred to the Oracle Calendar server as part of the migration process. As a result, you need to have the Microsoft Outlook Address Book service configured before you can use contacts with OCFO.

This may already be part of your Outlook profile, but Oracle recommends that you verify the same by following these steps:

1. Click **Tools** and then click **Services**. This opens a window with all the service providers for a particular profile.
2. Click the **Services** tab.
3. Click **Add** if the Outlook Address Book is not displayed in the list of services.
4. Select **Outlook Address Book** from the Add Service to Profile dialog.



### Personal Folders

Personal folders are sometimes referred to as PST files and are folders that reside on your computer locally (as opposed to residing on the server).

To create a personal folder:

1. Click **Tools** and then click **Services**. This opens a window with all the service providers for that profile.
2. Click the **Services** tab.
3. Click **Add**.



4. Select **Personal Folders** from the Add Service to Profile dialog.
5. In the Create/Open Personal Folders File window, you can either select an existing PST file or create one by entering a file name.
6. Click **Open**.
7. Enter any special configurations for the folder and click **OK**.

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**Note:** When migrating from another Outlook environment you should first move all your old PST files from that environment to your new one. If you are using the same computer, it is sufficient to point to the same PST location you were previously using with Outlook and Exchange. Contact the Help Desk if you are unfamiliar with performing this task, or check the Oracle Collaboration Suite End-User Documentation Portal, a set of informative HTML pages provided with each installation of Oracle Collaboration Suite (ask your administrator or the help desk about this).

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## Coexistence with Oracle Oracle Messenger

The Oracle Messenger client works only on a Microsoft Windows machine. If you need to use a platform other than Microsoft Windows, you can use one of the following third-party messaging clients to connect to Oracle Messenger:

- Gaim 1.1.1 on Microsoft Windows, Linux, and UNIX
- iChat 3.0 Mac OS X 10.4

The following sections describe how to configure the messaging clients to connect to Oracle Messenger. If you are a user on a non-Windows platform, you can follow these instructions to use a third-party client to communicate with Oracle Messenger.

The chapter contains the following sections:

- [Using Gaim with the Oracle Messenger Server](#)
- [Using iChat With the Oracle Messenger Server](#)

### Using Gaim with the Oracle Messenger Server

To set up the Gaim messaging client to use the Oracle Messenger server, follow these steps:

1. Download and install a copy of Gaim version 1.1.1 or higher from a site such as <http://gaim.sourceforge.net/>.
2. Create an account with the following information:
  - **Protocol:** Select **Jabber**.
  - **Scrennname:** Type your login name, for example Firstname.Lastname.
  - **Server:** Type the domain name of the machine hosting Oracle Messenger, for example, acme.com. This is appended to the screen name you entered earlier. You have to click **Tools, Options**, and then **Connection** in your Oracle Messenger window to see the domain name of the Oracle Messenger server.
  - **Resource:** Type Gaim.
  - **Password:** Type your single sign-on password for Oracle Messenger.
  - **Alias:** Type an alias for your identity on Gaim.
  - **Remember password:** Select this if you want Gaim to remember this information the next time you use this account.
  - **Auto login:** Select this if you want Gaim to automatically log in to this account.

- **Use TLS if available:** Select this if Transaction Layer Security (TLS) is available.
  - **Allow plaintext auth over unencrypted streams:** Select this (to allow plain text authentication) if not using Secure Socket-Layer (SSL) connections.  
If you are not certain whether you are using secure connections, ask your system administrator.
  - **Port:** Type 5222 for non-SSL connections or 5223 for SSL connections.
  - **Connect server:** Type the name of the computer hosting Oracle Messenger. If you do not know, ask your system administrator.
  - **Proxy type:** Select **No Proxy** if you do not use a proxy server. If you use a proxy server, enter the server information here.
3. After you have created the account, you can log in to it using your Oracle Single Sign-On account name and password. Your Oracle Messenger contact list will be imported into Gaim.
  4. If you do not have a previous Oracle Messenger setup, you can add contacts by selecting **Add a Buddy** and entering the contact's Oracle Single Sign-On account ID for Screen Name.

Contacts running Oracle Messenger will see any messages you send from this client in an Oracle Messenger chat window. If other contacts are also using Gaim and do not have RTC Messenger installed, they will receive the message in a Gaim chat window.

## Using iChat With the Oracle Messenger Server

The iChat 3.0 software is scheduled to release with Mac OS X 10.4 (Tiger). When iChat 3.0 is available, check the Oracle Messenger FAQ for information on configuring iChat to communicate with Oracle Messenger.

The Oracle Messenger FAQ can be accessed at:

[http://www.oracle.com/technology/products/cs/user\\_info/ortc/messenger\\_index.html](http://www.oracle.com/technology/products/cs/user_info/ortc/messenger_index.html)

# Part VI

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## Appendixes

This part contains various appendixes related to e-mail and calendar migration.

Part V contains the following appendixes:

- [Appendix A, "Plug-In Generated File Formats"](#)
- [Appendix B, "Migrating from A Standalone Internal Calendar Server To Oracle Collaboration Suite"](#)
- [Appendix C, "Migrating from Internal Calendar Server to External"](#)
- [Appendix D, "Troubleshooting E-mail Migration"](#)
- [Appendix E, "Troubleshooting Calendar Migration"](#)



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## Plug-In Generated File Formats

This appendix provides the following sample LDIF and XML file formats:

- [User List File Format \(XML\)](#)
- [Distribution List File Format \(LDIF\)](#)
- [Public Aliases File Format \(LDIF\)](#)
- [Shared Folder File Format \(LDIF\)](#)
- [User Profile File Format \(LDIF\)](#)
- [MBOX Files Format](#)
- [Foldermap Structure](#)

### User List File Format (XML)

The following is the syntax of a user list file in XML format (`users.xml`):

```
<?xml version="1.0" encoding="US-ASCII" ?>
<!ELEMENT userlist (user*)>
<!ATTLIST userlist passwordencrypted CDATA #IMPLIED >
<!ELEMENT user EMPTY>
<!ATTLIST user
  sourceimapuserid CDATA #REQUIRED
  sourcecx400username CDATA #IMPLIED
  sourceimappasswd CDATA #IMPLIED
  sourceimapserver CDATA #IMPLIED

  targetimapuserid CDATA #IMPLIED
  targetimappasswd CDATA #IMPLIED
  targetimapserver CDATA #IMPLIED
  quota CDATA #IMPLIED >
```

For MBOX-based migration, only the `sourceimapuserid` attribute is mandatory.

For IMAP-based migration, the `sourceimapuserid` and `sourceimappasswd` attributes are mandatory. If you are migrating to a new e-mail domain, you must specify this domain name in the user list file.

The following is a sample user list file for two users:

```
<userlist>
  <user
    sourceimapuserid="Test1_User1"
    sourcecx400username="Test1 User1/imteam,dev,idc,um"
    sourceimappasswd="welcome"
    sourceimapserver="prim1"
```

```
        targetimapuserid="Test1.User1"
        targetimappasswd="welcome1"
        targetimapserver="second1"
    />
<user
  sourceimapuserid="Test2_User2"
  sourcex400username="Test2 User2/imteam,qa,fdc,um"
  sourceimappasswd="welcome"
  sourceimapserver="prim1"
  targetimapuserid="Test2.User2"
  targetimappasswd="welcome1"
  targetimapserver="second1"
  targetdomain="domain_name"
/>
</userlist>
```

The values for all other attributes are provided using the migration setup wizard. For any user, if the administrator does not want to use the default values, specific values can be provided using the specified format.

## Distribution List File Format (LDIF)

The distribution list file, `distribution_lists.ldif`, that the plug-in generates is in the following format:

```
dn: cn= dl1
cn:dl1
objectclass: top
objectclass: groupofuniquenames
objectclass: orclMailGroup
orclmgprfc822mailmember: user1@acme.com
orclmgprfc822mailmember: user2@acme.com
mail:dl1@acme.com
uniquemember: dl200@acme.com
uniquemember: dl300@acme.com
uniquemember: dl400@acme.com

dn: cn= dl2
cn:dl2
objectclass: top
objectclass: groupofuniquenames
objectclass: orclMailGroup
orclmgprfc822mailmember: user4@acme.com
orclmgprfc822mailmember: user3@acme.com
mail:dl2@acme.com
uniquemember: xd1500@acme.com
uniquemember: xd1400@acme.com
```

The `mail` attribute contains the fully-qualified name of the distribution list. The migration tool expects the name in the format `dlname@sourcedomain`.

The `orclmgprfc822mailmember` attribute is the fully-qualified e-mail address of a user who is a member of the distribution list. The migration tool expects the name in the format `source_imap_userid@sourcedomain`.

The `uniquemember` attribute contains the sub distribution lists of this distribution list. The migration tool expects the name in the format `dlname@sourcedomain`.



## Public Aliases File Format (LDIF)

The public alias information file, `public_aliases.ldif`, that the plug-in generates is in the following format:

```
dn:cn=alias1
name:alias1@acme.com
cn:alias1
orclmailemail:user1@acme.com
objectclass:top
objectclass:orclMailAlias

dn:cn=alias2
name:alias2@acme.com
cn:alias3@acme.com
orclmailemail:user2@acme.com
objectclass:top
objectclass:orclMailAlias

dn:cn=alias3
name:alias3@acme.com
cn:alias3
orclmailemail:user3@acme.com
objectclass:top
objectclass:orclMailAlias
```

The `name` attribute contains the fully-qualified name of the alias. The migration tool expects the name in the format *aliasname@sourcedomain*.

The `orclmailemail` attribute is the fully-qualified e-mail address of the user for whom this alias is created. The migration tool expects the name in the format *source\_imap\_userid@sourcedomain*.

## Shared Folder File Format (LDIF)

The shared folder file, `shared_folders.ldif`, generated by the plug-in contains information about shared folders that are being migrated, and is in the following format:

```
dn: cn=/pubfol
objectclass: top
objectclass: orclMailFolder
orclmailaci: user2@acme.com l r w
orclmailaci: user4@acme.com l r
owner: user1@acme.com
cn:/pubfol
orclIsSharedFolder: false

dn: cn=/shfol
objectclass: top
objectclass: orclMailFolder
orclmailaci: user2@acme.com l r w
orclmailaci: user4@acme.com l r
owner: user1@acme.com
cn:/shfol
orclIsSharedFolder: true
```

The `cn` attribute contains the name of the shared folder. Oracle Collaboration Suite Email Migration Tool expects the name in the format */foldername*.

The `orclmailaci` attribute contains ACI information. Oracle Collaboration Suite Email Migration Tool expects the user name of the ACI in the format `source_imap_userid@sourcedomain`.

The `orclIsSharedFolder` attribute has a false value if the folder is a public folder.

The `orclMailStore` attribute contains the distinguished name of the target mail store on which the shared folder is to be created.

The `owner` attribute contains the fully-qualified mail address of the owner of the shared folder. The migration tool expects the name in the format `source_imap_userid@sourcedomain`.

## User Profile File Format (LDIF)

If your source directory information comes from a user profile file, `user_profiles.ldif`, instead of an LDAP directory, use the following format:

```
dn: cn=user_given_name,dc=acme,dc=com
cn: user_given_name
mail: username@acme.com
title: title
telephoneNumber: telephone_number
homePhone: telephone_number
sn: surname
st: state
physicalDeliveryOfficeName: physical_delivery_address_of_office
manager: user's_manager
ou: organizational_unit
o: organization
secretary: name_of_secretary
postalAddress: postal_delivery_address
```

The only mandatory attributes are `mail` and `sn`. Mail is expected in the format `sourceuserid@sourcedomain`.

## MBOX Files Format

The format of the MBOX file for e-mail messages is as follows

```
From "idcsurname1"
From: "idcsurname1" <"idcsurname1"@incq028b.idc.acme.com>
Subject: =? ISO-8859-1? B? SGk=? =
Date: Thu, 17 Jul 2003 12:45:01 +0000
To: idcuser1.idcpost.idcdomain
Message-ID: <3F169A4D.IDCDOMAIN.IDCPOST.100.16A7470.1.2C1C.1
Rm9yd2FyZGVkIG1lc3NhZ2UgDQo= Message body goes here

From "idcsurname1" - Start of the next message
From: "idcsurname1" <"idcsurname1"@incq028b.idc.acme.com>
Subject: =? ISO-8859-1? B? Zmlyc3QgZm9yd2FyZGUgbWVzc2E=? =
=? ISO-8859-1? B? Z2UgRndkOiBIaQ==? =
Date: Thu, 17 Jul 2003 12:45:21 +0000
To: idcuser1.idcpost.idcdomain
Message-ID: <3F169A61.IDCDOMAIN.IDCPOST.100.16A7470.1.2C1E.1>
Rm9yfbasdbZGVkIG1lc3NhZ2UgDQo= Message body goes here
```

## Foldermap Structure

When the e-mail messages are extracted and stored in MBOX files, there should be a mapping to find out the folder name that corresponds to each file. This information is stored in the foldermap file, which the migration tool uses to find the number and the folder name mapping. A typical foldermap file will be as follows:

- S, Mailbox, 1
- S, Documents, 2
- S, Documents/ Authored, 3
- S, Documents/Default Library, 4

The foldermap file name will be of the format `username@domain_foldermap`.



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## Migrating from A Standalone Internal Calendar Server To Oracle Collaboration Suite

This appendix describes how to migrate a standalone Calendar 10gR1 server with an internal directory to an Oracle Collaboration Suite Calendar server installation.

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**Note:** This migration procedure assumes all installations are on the same operating system.

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The appendix has the following sections:

- [Planning](#)
- [Installing the Oracle Collaboration Suite Calendar](#)
- [Populating Oracle Internet Directory with User and Resource Information](#)
- [Modifying Oracle Collaboration Suite Configuration Files](#)
- [Migrating the Calendar Database](#)
- [Updating the Node Network](#)
- [Updating the Client Configuration](#)

### Planning

To ensure a successful migration from an internal Oracle Calendar server deployment to Oracle Collaboration Suite Calendar, it is important to take time to carefully plan the migration. If multiple Oracle Calendar servers exist in the standalone deployment, they must all be migrated at the same time, because internal deployments of Oracle Calendar server cannot coexist with Oracle Collaboration Suite Calendar instances. In addition, during the migration process, all Oracle Calendar servers must be stopped. Although a planned outage will be necessary, effective preparation will help minimize migration time.

Migrating the Oracle Calendar server with an internal directory to Oracle Collaboration Suite Calendar also necessitates the creation of user entries in Oracle Internet Directory. Once the user accounts are available in Oracle Internet Directory, other Oracle Collaboration Suite components, including Oracle Calendar, such as Oracle Mail, Oracle Content Services, and Oracle Real-Time Collaboration will be automatically provisioned.

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**Note:** Creating user accounts in Oracle Internet Directory can trigger an automatic provisioning policy for many Oracle Collaboration Suite components. User provisioning can be customized for different components. For more information on user provisioning to Oracle Collaboration Suite components, see "Provisioning Procedures" in Chapter 4 of *Oracle Collaboration Suite Administrator's Guide*.

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Migrating from an internal Calendar server deployment to Oracle Collaboration Suite Calendar can be broken down into four steps:

1. [Installing the Oracle Collaboration Suite Calendar](#)
2. [Populating Oracle Internet Directory with User and Resource Information](#)
3. [Modifying Oracle Collaboration Suite Configuration Files](#)
4. [Migrating the Calendar Database](#)

## Installing the Oracle Collaboration Suite Calendar

When installing Oracle Collaboration Suite Calendar, it is important to install a mirror image of the node setup that currently exists in your standalone deployment. This means installing the same number Applications tiers, with the same number of nodes, same node IDs, same alias values, and the same masternode configuration. The first Oracle Collaboration Suite Application tier installed must correspond with the internal Calendar server masternode value, because the masternode condition is assigned by the Oracle Universal Installer.

The node IDs of the Oracle Collaboration Suite Calendar installation should be the same as that of the existing internal Calendar server installation. In order to be able to specify NodeIDs during the installation process, the installation must be run with additional specifications:

- In UNIX operating systems:

```
./runInstaller oracle.cal.server:s_nodeID="nodeid"
```

- In Windows operating systems:

```
setup.exe oracle.cal.server:s_nodeID="nodeid"
```

Once all the Oracle Collaboration Suite Calendar servers are installed, it is advisable to create a table. This will facilitate tracking the mapping between the node, host, and port information of the Calendar server internal deployment and the node, host, and port information of Oracle Collaboration Suite Calendar. To find the hostname and port for a Calendar server, see the `$ORACLE_HOME/ocal/misc/unison.ini` file and note the [ENG] calendarhostname and [ENG] port values. These form the `host:port` values listed in the following model table:

NodeID	StandaloneHost	SuiteHost
nodeid1	sa_host1:port	suite_host1:port
nodeid2	sa_host1:port	suite_host1:port
nodeid3	sa_host2:port	suite_host2:port

This table will be used later during this migration process to help configure the Calendar node network.

Once all the Oracle Collaboration Suite Calendar servers are installed, you *must* stop all Oracle Collaboration Suite Calendar servers. For more information on stopping and starting Oracle Calendar, see "Starting and Stopping the Calendar Server" in Chapter 5 of *Oracle Calendar Administrator's Guide*.

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**Note:** All the Oracle Collaboration Suite Calendar servers must be running while the Oracle Collaboration Suite installations are performed.

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## Populating Oracle Internet Directory with User and Resource Information

This section outlines how to migrate the user and resource entries to Oracle Internet Directory. This procedure involves exporting the user and resource entries from internal Calendar to an LDAP Data Interchange Format (LDIF) file, and then importing the LDIF file into Oracle Internet Directory.

The section contains the following:

- [Creating an LDIF File](#)
- [Modifying the LDIF File for Oracle Collaboration Suite](#)
- [Importing the LDIF files into Oracle Internet Directory](#)
- [Converting the Format of the Directory Entries](#)
- [Removing Event Calendars User Entries from the Directory](#)

### Creating an LDIF File

Use the `unldb2ldif` utility to export the user and resource entries from Oracle Calendar Standalone to an LDIF file. You need to perform this operation against each and every node of your Internal Calendar deployment while both the standalone internal server and the Oracle Collaboration Suite Oracle Internet Directory are active.

The `unldb2ldif` utility generates an LDIF file for each node. As a result, if you have a four-node network, you will have four generated LDIF files. Because the content of these files depends on the configuration you supply to `unldb2ldif` through its initialization file, it is important that the initialization file is set up properly. In particular, the `[LDAP] dsa` value must be set to `unknown`.

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**See Also:** For more information about the `unldb2ldif` utility, see "Calendar Server Utilities" in Chapter 6 of *Oracle Calendar Reference Manual*.

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**Note:** The `unldb2ldif` utility is not available with Oracle Collaboration Suite installations. It is intended for use with Oracle Calendar standalone installations only.

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After you have generated the LDIF files, you must ensure that no new accounts get created, deleted, or modified on any Calendar server standalone internal nodes. Any changes made to the accounts information after the `unldb2ldif` is run will not be applied to the Oracle Collaboration Suite accounts.

## Modifying the LDIF File for Oracle Collaboration Suite

Format the LDIF entries correctly for use with Oracle Internet Directory. This can be accomplished by running a script against the LDIF file(s) generated. You will need to adjust the `SOURCEDN` value according to your installation. The script is as follows:

```
#!/bin/sh
SOURCEDN="cn=<users>,dc=<visioncorp>,dc=<com>"
if [ "$1" = "" ]
then
    echo "usage: convert.sh filename"
exit 2;
fi
FILENAME=$1
while read XX
do
    # Apply only to users
    if [ ! -z "`echo $XX | grep "$SOURCEDN`" ]
    then
        # add "dn: " if necessary
        if [ -z "`echo $XX | grep "^dn:"`" ]
        then
            echo -n "dn: " >> $FILENAME.$$
        fi
        # Append the missing objectclass
        echo $XX >> $FILENAME.$$
        echo "objectclass: orclUser" >> $FILENAME.$$
        echo "objectclass: orclUserV2" >> $FILENAME.$$
    else
        # Keep as-is
        echo $XX >> $FILENAME.$$
    fi
done < $FILENAME
\mv $FILENAME.$$ $FILENAME
```

## Importing the LDIF files into Oracle Internet Directory

After modifying the LDIF file, verify that all the Oracle Collaboration Suite Calendar servers are down. This can be accomplished by running the `$ORACLE_HOME/ocal/bin/unistatus` utility. For more information about the `unistatus` utility, see "Calendar Server Utilities" in Chapter 6 of *Oracle Calendar Reference Manual*.

Then import the LDIF files into the Oracle Internet Directory server with the following command:

```
$ORACLE_HOME/bin/ldapmodify -c -h OID_hostname -p OID_port -D "cn=orcladmin" -w orcladmin_password -f LDIFfile
```

---

---

**Note:** Importing users into the Oracle Collaboration Suite deployment can also trigger automatic provisioning of Oracle Mail, Oracle Content Services, and Oracle Real-Time Collaboration accounts. For more information on user provisioning to Oracle Collaboration Suite components, see "Provisioning Procedures" in Chapter 4 of *Oracle Collaboration Suite Administrator's Guide*.

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## Converting the Format of the Directory Entries

Convert the user accounts to the correct format. This is required because `unldb2ldif` can not identify the Oracle Internet Directory version being used. To convert the accounts on each of the Oracle Collaboration Suite Calendar server, *without* starting the server, run the following command:

```
$ORACLE_HOME/ocal/bin/unioidconf -upgrade
```

You can safely ignore any warnings, but not errors, generated in the `$ORACLE_HOME/ocal/log/unioidconf.log` file.

## Removing Event Calendars User Entries from the Directory

In Oracle Collaboration Suite 10gR1, Event Calendars accounts are not considered real Directory Server accounts.

Oracle recommends removing Oracle Internet Directory user accounts that are represented as Event Calendars accounts.

## Modifying Oracle Collaboration Suite Configuration Files

A number of Oracle Calendar configuration files need to be modified to ensure a successful migration.

### Updating the `unison.ini` File for Oracle Collaboration Suite

For each Oracle Collaboration Suite Applications tier Calendar server installation, copy any customizations that were made in the corresponding Calendar standalone `unison.ini` file. However, this is optional.

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**Caution:** Do not overwrite the destination (Oracle Collaboration Suite) `unison.ini` file with the source (Oracle Calendar standalone) `unison.ini` file.

---



---

But you must:

1. Remove all the numeric sections [*number*] along with their keys from the `unison.ini` file of Oracle Collaboration Suite. The following is an example of a numeric section:

```
[1234]
name = N1
version = A.06.10
timezone = EST5EDT
```

2. Copy the numeric section from the standalone `unison.ini` file to the matching Oracle Collaboration Suite server `unison.ini` file.

### Copying the `.ini` Files

In addition to `unison.ini`, other configuration files may have been modified in your Calendar standalone installation. For each Oracle Collaboration Suite Calendar installation, copy the following files (located in `$ORACLE_HOME/ocal/misc`) of the corresponding standalone installation to the Oracle Collaboration Suite installation:

- `user.ini`

- resource.ini
- eventcal.ini
- categories.ini
- categorytype.ini

## Migrating the Calendar Database

The most critical part of the migration process is migrating the Calendar database to Oracle Collaboration Suite.

Before the database migration, your Calendar system should be similar to the following:

1. The Standalone deployment should be up and running, but without any new account creations, modifications or deletions.
2. The Oracle Collaboration Suite deployment should be inactive, and the appropriate configuration files should be updated.
3. Oracle Internet Directory should be populated with account information from the Calendar standalone deployment.

The following steps need to be taken for all Calendar standalone instances:

- [Stopping all Calendar Standalone Servers](#)
- [Moving the Database](#)
- [Updating the Node Network Information on the Oracle Collaboration Suite Calendar Server](#)

### Stopping all Calendar Standalone Servers

Stop all Oracle Calendar standalone servers by running `$ORACLE_HOME/ocal/bin/unistop`.

### Moving the Database

On the Oracle Collaboration Suite Calendar server, rename the `$ORACLE_HOME/ocal/db` directory to `$ORACLE_HOME/ocal/db_blank`. In addition, copy the `$ORACLE_HOME/ocal/db` directory from the standalone Calendar server into the `$ORACLE_HOME/ocal` directory on the corresponding Oracle Collaboration Suite Calendar server.

### Updating the Node Network Information on the Oracle Collaboration Suite Calendar Server

Each of the Calendar databases stores a record with host information of other servers that are part of the node network. Use the mapping table that you have created in "[Installing the Oracle Collaboration Suite Calendar](#)" to apply the appropriate changes to the node network on the migrated Oracle Collaboration Suite Calendar instances.

Follow these steps to update node network information:

1. On an Oracle Collaboration Suite Calendar server, run the following command:

```
$ORACLE_HOME/ocal/bin/unidbfix -export -n all
```

This creates the `$ORACLE_HOME/ocal/db/nodes/N#/perm/remotenode.ini` file, where `N#` is the value of the name parameter within the node specific section in the `$ORACLE_HOME/ocal/misc/unison.ini` file.

The content of `remotenode.ini` should look like the following with a section for each remote node:

```
[nodeid2]
RN_NUMCONNECT = 3
RN_ACCESSMETHOD = 2
RN_SERVICENAME = "unieng"
RN_HOSTNAME = "sa_host1:port"
```

2. Modify the generated `remotenode.ini` files. Using your mapping table, replace the `RN_HOSTNAME` value from the standalone `hostname:port` to the new Oracle Collaboration Suite Calendar `hostname:port`.

```
[nodeid2]
RN_NUMCONNECT = 3
RN_ACCESSMETHOD = 2
RN_SERVICENAME = "unieng"
RN_HOSTNAME = "suite_host1:port"
```

---



---

**Note:** You may have several `[nodeid]` sections in `remotenode.ini`. Each `nodeid` section must be adjusted in the same way.

---



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3. If the Oracle Collaboration Suite Calendar server has several nodes, you will have several `remotenode.ini` files, one per `N#` directory. Update each of the files.
4. Update the host information using the following command:

```
$ORACLE_HOME/ocal/bin/unidbfix -import -n all
```

This must be done on all the Oracle Collaboration Suite Calendar installations to ensure a consistent calendar node network.

## Updating the Node Network

After you migrate the Calendar database and update the node network information, you need to update the `nodes.ini` file. To do so:

1. Start all the Oracle Collaboration Suite Calendar servers.
2. Locate the Oracle Collaboration Suite server with the configured `masternode`. The Calendar server with the `$ORACLE_HOME/ocal/misc/nodes.ini` file houses the `masternode`, and will be on the first Oracle Collaboration Suite Calendar Applications tier that was installed.
3. Run the following command line utility to update the `$ORACLE_HOME/ocal/misc/nodes.ini` file:

```
$OH/ocal/bin/uninode -init
```
4. Edit the `$ORACLE_HOME/ocal/misc/nodes.ini` file and verify that all the information matches.

## Updating the Client Configuration

Notify end users of the change in hostname and port. End users will need to reconfigure their Oracle Connector for Outlook, Oracle Calendar desktop clients, Oracle Calendar Sync clients to reflect the new hostname and port information. Additionally, this information may need to be modified for the Oracle Calendar Web client.

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# Migrating from Internal Calendar Server to External

This appendix describes how to migrate a standalone Calendar 10gR1 server with an internal directory to a standalone Calendar server with an external directory.

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**Note:** This migration procedure assumes all installations are on the same operating system.

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The appendix has the following sections:

- [Planning](#)
- [Installing the Standalone External Calendar](#)
- [Populating the iPlanet Directory with the User and Resource Information](#)
- [Configuring the External Calendar Configuration Files](#)
- [Migrating the Calendar Database](#)
- [Updating the nodes.ini File](#)
- [Updating the Client Configuration](#)

## Planning

To ensure a successful migration from an internal Calendar server deployment to external Calendar, it is important to take time to carefully plan the migration. If multiple Calendar servers existed in the standalone deployment, all the servers must be migrated at the same time. In addition, during the migration process, all Calendar servers must be stopped. Although a planned outage will be necessary, an effective preparation will help minimize migration time.

Migrating from an internal Calendar server deployment to external Calendar can be broken down into three steps:

1. Install the standalone external calendar.
2. Populate the iPlanet Directory Server with the user and resource information.
3. Migrate the Calendar nodes and adjust the node network.

## Installing the Standalone External Calendar

When installing external Calendar, it is important to install a mirror image of the node setup that currently exists in your internal deployment. This means installing the same number of External Calendar servers, with the same number of nodes, same node IDs, same alias values, and the same masternode configuration. The first external Calendar server installed must correspond with the internal Calendar server masternode value. These new external Calendar servers will be installed against an iPlanet Directory.

The node IDs of the external Calendar installation should be the same as that of the existing internal Calendar server installation. Specify the proper NodeID during the installation phase.

To find the hostname and port for a Calendar server (either internal or external), see the `$ORACLE_HOME/ocal/misc/unison.ini` file and note the `[ENG] calendarhostname` and `[ENG] port` values. These form the `host:port` values in the following model table.

NodeID	InternalHost	ExternalHost
nodeid1	int_host1:port	ext_host1:port
nodeid2	int_host1:port	ext_host1:port
nodeid3	int_host2:port	ext_host2:port

This table will be used later to help configure the calendar node network.

Once all the Oracle Collaboration Suite Calendar servers are installed, you *must* stop all Calendar servers. For more information on stopping and starting Oracle Calendar, see "Starting and Stopping the Calendar Server" in Chapter 5 of *Oracle Calendar Administrator's Guide*.

## Populating the iPlanet Directory with the User and Resource Information

This section outlines how to migrate the user and resource entries to iPlanet Directory. This procedure involves exporting the user and resource entries from Oracle Calendar to an LDAP Data Interchange Format (LDIF) file and then importing the LDIF file into iPlanet Directory.

This section contains the following:

- [Creating an LDIF file](#)
- [Modifying the LDIF file](#)
- [Importing the LDIF files into iPlanet](#)

### Creating an LDIF file

Use the `unldb2ldif` utility to export the user and resource entries from Oracle Calendar standalone internal to an LDIF file. You need to perform this operation against each and every node of your internal Calendar deployment while both the standalone internal server and the iPlanet Directory are active.

The `unldb2ldif` utility generates an LDIF file for each node. As a result, if you have a four-node network, you will have four generated LDIF files. Because the content of these files depend on the configuration you supply to `unldb2ldif` through its `.ini` file, it is important that the `.ini` file is set up properly.

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**See Also:** For more information about the `unldb2ldif` utility, see "Calendar Server Utilities" in Chapter 6 of *Oracle Calendar Reference Manual*.

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**Note:** The `unldb2ldif` utility is not available with external Calendar installations. It is intended for use with Oracle Calendar Standalone installations only.

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After you have generated the LDIF files, you must ensure that no new accounts get created, deleted, or modified on any internal Calendar server nodes. Any changes made to the accounts information done after the `unldb2ldif` is run are not applied to the external Calendar accounts.

## Modifying the LDIF file

If you allow logins by a resource, add a `userPassword` attribute to the resource entries in the LDIF file.

## Importing the LDIF files into iPlanet

After modifying the LDIF file, verify that all the external Calendar servers are down. This can be accomplished by running the `$ORACLE_HOME/ocal/bin/unistatus` utility. For more information about the `unistatus` utility, see "Calendar Server Utilities" in Chapter 6 of *Oracle Calendar Reference Manual*.

Then import the LDIF files into the iPlanet Directoryserver by using the following command:

```
$ORACLE_HOME/bin/ldapmodify -c -h iPlanet_hostname -p iPlanet_port -D
"cn=orcladmin" -w orcladmin_password -f LDIFfile
```

## Configuring the External Calendar Configuration Files

You need to update the `.ini` files on the external Calendar installation for successful migration.

## Updating the `unison.ini` File for Oracle Collaboration Suite

For each external Calendar server installation, copy any customizations that were made in the corresponding Calendar standalone `unison.ini` file. However, this is optional.

---



---

**WARNING:** Do not overwrite the destination (external Calendar standalone) `unison.ini` file with the source (internal Calendar standalone) `unison.ini` file.

---



---

But you must:

1. Remove all the numeric sections `[number]` along with their keys from the `unison.ini` file of external Calendar. The following is an example of a numeric section:

```
[1234]
```

```
name = N1
version = A.06.10
timezone = EST5EDT
```

2. Copy the numeric section from the internal standalone `unison.ini` file to the matching external Calendar server `unison.ini` file.

## Copying the .ini Files

In addition to `unison.ini`, some of the configuration files may have been modified in your internal Calendar installation. So, for each external Calendar server installation, copy the following files (located in `$ORACLE_HOME/ocal/misc`) of the matching internal Calendar installation to the external Calendar installation:

- `user.ini`
- `resource.ini`
- `eventcal.ini`
- `categories.ini`
- `categorytype.ini`

## Migrating the Calendar Database

The most critical part of the migration process is migrating the Calendar database to external Calendar server.

Before the database migration, your Calendar system should be similar to the following:

1. The internal Calendar deployment is still up and running, but without any new account creations, modifications, or deletions.
2. The external deployment should be inactive, and the appropriate configuration files should be updated.
3. iPlanet Internet Directory filled with the accounts information from the internal Calendar deployment.

The following steps need to be taken for all Calendar standalone instances:

- [Stopping All the Internal Servers](#)
- [Moving the Database](#)
- [Updating the Node Network Information on the External Calendar Server](#)

### Stopping All the Internal Servers

For each internal Calendar server, run `$ORACLE_HOME/ocal/bin/unistop`. This stops both the internal and the external Calendar servers.

### Moving the Database

On the external Calendar server, rename the `$ORACLE_HOME/ocal/db` directory to `$ORACLE_HOME/ocal/db_blank`. In addition, copy the `$ORACLE_HOME/ocal/db` directory from the internal Calendar server to `$ORACLE_HOME/ocal/db` on the matching (corresponding) external Calendar server.



## Updating the Node Network Information on the External Calendar Server

Each of the Calendar databases stores a record with host information of other servers that are part of the node network. Use the mapping table that you have created in ["Installing the Standalone External Calendar"](#) to apply the appropriate changes to the node network on the migrated external Calendar instances.

The following are the steps to update node network information:

1. On an external Calendar server, run the following command:

```
$ORACLE_HOME/ocal/bin/unidbfix -export -n all
```

This creates the `$ORACLE_HOME/ocal/db/nodes/N#/perm/remotenode.ini` file, where `N#` is the value of the name parameter within the node-specific section in the `$ORACLE_HOME/ocal/misc/unison.ini` file.

The content of `remotenode.ini` should look like the following with a section for each remote node:

```
[nodeid2]
RN_NUMCONNECT = 3
RN_ACCESSMETHOD = 2
RN_SERVICENAME = "unieng"
RN_HOSTNAME = "int_host1:port"
```

2. Modify the generated `remotenode.ini` files. Using your mapping table, replace the `RN_HOSTNAME` value from the internal `hostname:port` to the new external `hostname:port`.

```
[nodeid2]
RN_NUMCONNECT = 3
RN_ACCESSMETHOD = 2
RN_SERVICENAME = "unieng"
RN_HOSTNAME = "ext_host1:port"
```

---



---

**Note:** You may have several `[nodeid]` sections in `remotenode.ini`, and all of them must be adjusted in this way.

---



---

3. If the external Calendar server has several nodes, you will have several `remotenode.ini` files, one per `N#` directory. Update each of the files.
4. Update the host information using the following command:

```
$ORACLE_HOME/ocal/bin/unidbfix -import -n all
```

This must be done on all the external Calendar installations to ensure a consistent calendar node network.

## Updating the nodes.ini File

After you migrate the Calendar database and update the node network information, you need to update the `nodes.ini` file. To do so:

1. Start all the external Calendar servers.
2. Locate the external server acting as the master node server. The Calendar server with the `$ORACLE_HOME/ocal/misc/nodes.ini` file houses the `masternode`, and will be on the first external Calendar tier that was installed.

3. Run `$OH/ocal/bin/uninode -init` to update `$ORACLE_HOME/ocal/misc/nodes.ini`.
4. Edit the `$ORACLE_HOME/ocal/misc/nodes.ini` file and verify that all the information matches.

## Updating the Client Configuration

Notify end users of the change in hostname and port. End users will need to reconfigure their Oracle Connector for Outlook, Oracle Calendar desktop clients, Oracle Calendar Sync clients to reflect the new hostname and port information. Additionally, this information may need to be modified for the Oracle Calendar Web client.

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## Troubleshooting E-mail Migration

This appendix covers issues regarding e-mail migration and tips to troubleshoot these issues. In addition, it covers the some frequently asked questions regarding e-mail migration. The appendix contains the following sections:

- [Oracle Collaboration Suite 10g Mail Migration Tool: Installation Issues](#)
- [Oracle Collaboration Suite 10g Mail Migration Tool: Account Migration Issues](#)
- [Oracle Collaboration Suite 10g Mail Migration Tool: Data Migration Issues](#)
- [Oracle Collaboration Suite E-mail Migration: FAQ](#)

### Oracle Collaboration Suite 10g Mail Migration Tool: Installation Issues

You may encounter issues while installing Oracle Collaboration Suite Email Migration Tool. This section covers some of the common issues and their workarounds.

**Exception in thread "main" java.lang.NoClassDefFoundError:  
oracle/mail/migration/migrate/Migrate**

**Action:** If you encounter this problem, check whether the Oracle home has been set and the `esmigration.zip` file has been extracted to the correct directory, which is `$ORACLE_HOME/oes/migration`.

**Error occurred during initialization of VM. Could not reserve enough space for  
object heap**

**Action:** If you encounter this issue, run Oracle Collaboration Suite Email Migration Tool on a computer that has a minimum of 1 GB RAM.

### Oracle Collaboration Suite 10g Mail Migration Tool: Account Migration Issues

You may encounter errors while migrating user accounts from a source e-mail system to Oracle Collaboration Suite. This section covers some common errors that occur during account migration.

**Error: Mandatory Attribute sn is missing for user *username***

**Action:** Populate the user's `sn` attribute on the source e-mail system and retry user provisioning.

**Error: javax.naming.NameNotFoundException:[LDAP:error code 32 - No Such Object]; remaining name *source\_ldap\_parent\_dn***

**Cause:** The source LDAP DN entered in the Mail Services page of the migration setup wizard is wrong.

**Action:** Correct the base DN.

**Error: User: *username*. Batch: *batch number*. Failed to create user. Target userID is an empty string.**

**Cause:** Applying the username generation rule for that user has resulted in an empty target userID.

**Action:** Perform the following steps:

1. Modify `users.xml` to add the unique `targetimapuserid` attribute to failed users.
2. Reload the users by clicking **File** and then click **Load Users** on the Oracle Collaboration Suite Email Migration Tool main window.
3. Click **Migrate** and then click **Provision Users** to provision the failed users in Oracle Collaboration Suite.

**Error: Batch=*batchnum* Failed to create entry on target LDAP server. [Invalid DN syntax]**

**Cause:** The manager attribute for the user is not a valid DN.

**Action:** Set the manager attribute mapping in the LDAP schema mapping wizard to No Mapping.

## Oracle Collaboration Suite 10g Mail Migration Tool: Data Migration Issues

You may encounter errors while migrating user data from a source e-mail system to Oracle Collaboration Suite. This section covers some common errors that occur during data migration.

**Error: Base user *username* does not exist on the target LDAP server.**

**Cause:** Account creation did not happen correctly.

**Action:** Rerun the account creation process and ignore any 'duplicate entry' errors.

**Error: User:*username*. Batch:*batchnumber*. Failed to migrate folder *foldername***

**Cause:** Folder migration failed during IMAP migration.

**Action:** Check if the folder is listed as a No-Select Folder. To check this, perform the following steps:

1. `telnet source_imap_host imap_port`
2. `login username password`
3. `list "" *`

**Error: User:*username*. Batch:*batchnumber*. Plug-in failed to generate MBOX**

**Cause:** The plug-in failed to extract the user's messages and folders.

**Action:** Check if the administrator profile has the requisite privileges. Refer to [Meeting System-Specific Requirements](#) for details on setting privileges on the source system.

**Error: User:username. Batch:batchnumber. Failed to route user**

**Cause:** The plug-in failed to set a routing rule.

**Action:** Check if the administrator profile has the requisite privileges. Refer to [Meeting System-Specific Requirements](#) for details on setting privileges on the source system.

**Error: User:username. Batch:batchnumber. Failed to migrate user's e-mail data**

**Cause:** One or more folders were not migrated.

**Action:** Check folder-specific errors in the migration log.

**Error: User:username. Batch:batchnumber. Out of memory error. Try increasing heap size**

**Cause:** Oracle Collaboration Suite Email Migration Tool does not have enough memory to operate.

**Action:** Increase the value of the `-Xmx` parameter in `migrate.sh` for Unix or in `migrate.cmd` for Microsoft Windows. In addition, reduce the number of concurrent users.

**Error: User:username. Batch:batchnumber. Failed to send e-mail to user username with subject mailsubject on SMTP server: servername**

**Cause:** The migration notifier could not send a notification message.

**Action:** Check if the specified SMTP server is running and allowing relay using the Oracle Enterprise Manager console.

## Oracle Collaboration Suite E-mail Migration: FAQ

This section contains some of the frequently asked questions (FAQ) regarding Oracle Collaboration Suite e-mail migration.

**Question 1: I am getting an error that the attribute *attributename* is not a fully qualified -mail address. What should I do?**

**Answer:** You are getting this because the specified attribute is not an e-mail address. You should provide a suitable e-mail address for the alias, distribution list, or shared folder.

**Question 2: What is the disk space required for an MBOX-based data migration on the computer where Oracle Collaboration Suite Email Migration Tool is run?**

**Answer:** The disk space requirement is approximately 300 MB for concurrently migrating 10 users, assuming a quota of 20 MB for each user. Note that the MBOX files are not deleted by the migration tool after the migration. The disk space is calculated using the following formula:

$$\text{Disk space required} = n * q * 1.5$$

where  $n$  is the number of users to be migrated and  $q$  is the quota for each user.

**Question 3: How do I resolve account name conflicts?**

**Answer:** If Oracle Collaboration Suite Email Migration Tool detects any duplicate target user names (also called name conflicts) when creating accounts in the target Oracle Internet Directory, then the tool logs an error and does not create the duplicate account. Duplicate target user name errors or name conflict errors can only be avoided if username generation rules are used in such a way that unique target user names are generated.

To resolve name conflicts, perform the following steps for all failed users:

1. Modify `users.xml` to add the unique `targetimapuserid` attribute to failed users.
2. Reload the users by clicking **File** and then click **Load Users** on the Oracle Collaboration Suite Email Migration Tool main window.
3. Click **Migrate** and then click **Provision Users** to provision the failed users in Oracle Collaboration Suite.

**Question 4: Can I run setup more than once?**

**Answer:** Yes, you can run the migration setup wizard more than once if the users are not already loaded into the migration repository. If you rerun the setup after loading the users, the state of all the users will be lost.

**Question 5: Can I load a user list more than once?**

**Answer:** Ideally, you should extract all users for all domain and load them once. However, multiple loading may be required if, for example, IMAP passwords are not entered in `users.xml` before loading the users. In this case, edit `users.xml` to enter or modify the required attributes and then reload the users.

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# Troubleshooting Calendar Migration

This appendix covers troubleshooting tips and frequently asked questions regarding migration to Oracle Calendar.

The appendix contains the following sections:

- [Troubleshooting Migration from Microsoft Exchange](#)
- [Troubleshooting Migration from MeetingMaker](#)
- [Troubleshooting Migration Using iCalendar Representation](#)

## Troubleshooting Migration from Microsoft Exchange

This section contains the troubleshooting tips and the frequently asked questions about migrating to Oracle Collaboration Suite from Microsoft Exchange.

### **Question: Where can I get the latest version of the ExMigrate tool?**

The latest version of the ExMigrate tool can be downloaded from Metalink (<http://metalink.oracle.com>). The following are the steps to locate the ExMigrate tool:

1. In the Metalink home page, click **Patches and Updates**.
2. Click **Simple Search**.
3. Enter 3394297 as the patch number and select **Microsoft Windows 32 bit (Client)** as the platform.

### **Question: ExMigrate does not provision Calendar accounts. How can I provision accounts for thousands of users?**

The unison user account contains a number of scripts in the unison/bin directory that help in account provisioning. Specifically, you can use unidssearch and uniuser to perform this task. unidssearch prints a list of all LDAP accounts that do not have Calendar service. The printed format is the syntax required by uniuser, which adds the Calendar service to an LDAP subscriber. So you can execute the two commands simultaneously. For example,

```
$ unidssearch > new_users
$ uniuser -ex new_users -n nodeid
```

Where nodeid is the number of your Calendar server node, which you provided during installation. If you have forgotten it, check the unison/misc/unison.ini file in the unison account.

The file new\_users will look something like this:

```
A DID=cn=UserOne,cn=Users,dc=us,dc=oracle,dc=com
A DID=cn=UserTwo,cn=Users,dc=us,dc=oracle,dc=com
```

**Question: ExMigrate requires a password value in the users.ini file. How can I retrieve the password?**

You can briefly modify the user passwords to a value that is known to you. In this case, you should communicate to the user population that their accounts will be temporarily unavailable while you perform the migration. Then, use an `ldapsearch` command to retrieve the current password settings, and store the settings in a file. This password value is an MD4 hashed value. However, this should not be a problem because you do not need to know the plain text value.

The following is an example of issuing the `ldapsearch` command:

```
$ORACLE_HOME/bin/ldapsearch -h hostname.domain -p 4032 -D cn=orcladmin -w
password -b "cn=Users,dc=us,dc=oracle,dc=com" "cn=" userpassword
```

The following is the output of the preceding command:

```
dn: cn=UserOne,cn=Users,dc=us,dc=oracle,dc=com
userpassword: {MD4}DI7mvQ+Wm9WcXrYRdYQYQQ==
dn: cn=UserTwo,cn=Users,dc=us,dc=oracle,dc=com
userpassword: {MD4}DI7mvQ+Wm9WcXrYRdYQYQQ==
```

First, save these results so you can restore the original password values later. Then, run the following command:

```
$ORACLE_HOME/bin/ldapmodify -v -r -h hostname.domain -p 4032 -D cn=orcladmin -w
password -f umod
```

Where `umod` is a file with contents similar to the following:

```
dn: cn=UserOne,cn=Users,dc=us,dc=oracle,dc=com
changetype: modify
userpassword: welcome1
dn: cn=UserTwo,cn=Users,dc=us,dc=oracle,dc=com
changetype: modify
userpassword: welcome1
```

So now for the period of your migration, you know the passwords of the users and you can build the `users.ini` file with these values. Once the migration is complete, you can do the reverse by running `ldapmodify` with a file that has contents similar to the following:

```
dn: cn=UserOne,cn=Users,dc=us,dc=oracle,dc=com
changetype: modify
userpassword: {MD4}DI7mvQ+Wm9WcXrYRdYQYQQ==
dn: cn=UserTwo,cn=Users,dc=us,dc=oracle,dc=com
changetype: modify
userpassword: {MD4}DI7mvQ+Wm9WcXrYRdYQYQQ==
```

**Question: What will ExMigrate allow me to migrate from Exchange? Will ExMigrate permit me to migrate PST or profile information from Outlook?**

The following information can be migrated from an Exchange server:

- Calendar
- Contacts
- Journal



- Notes
- Tasks

ExMigrate can only be used to migrate accounts and their scheduling information from the Exchange server. Refer to the Readme files which are part of the ExMigrate.zip for limitations and caveats.

**Question: How do I know if the Exchange Administrator profile has the correct privileges for running ExMigrate?**

Ask the Exchange site administrator. The Administrator account should have an Exchange mailbox, and have permissions to open and read other users' inboxes. Select the Admin role from the list of permissions for this user using the Exchange Management Interface.

**Question: How do I know whether my migration setup is correct?**

Try populating the [MasterList] section of ExMigrateUsers.ini with users accounts, and then add one of those accounts to the [MigrationSubset] section. This will allow you to test one account, and monitor the logs for the results.

**Question: How do I know if a user has been migrated?**

User accounts which are successfully migrated are marked as the following in the [MigrationSubset] section of ExMigrateUsers.ini (with a /D prefix):

```
D=1/E=ExchangeUser1/U=OCSUser1
```

If a user account is unsuccessfully migrated, it must be cleared and restarted.

**Question: I have run a test migration, and all the attendees for a specific meeting have their own copy of the meeting. What happened?**

Ensure that the [MasterList] section of the ExmigrateUsers.ini file is filled properly and it contains the complete list of users to be migrated. Although you are only migrating the accounts listed in the [MigrationSubset] section of the same file, the links to the meetings are maintained by consulting the users in the [MasterList] section. Any unresolved names in a meeting will cause this behavior.

**Question: I get a message stating that “Can’t connect to the Exchange server”. What could be causing this?**

Verify that the [ExchangeServer] section of the ExMigrateConfig.ini file is correctly filled out. Use the /hint switch with ExMigrate to generate this information. The latest version of ExMigrate supports the switch for both Exchange 5.5 and 2000.

## Troubleshooting Migration from MeetingMaker

This section contains the troubleshooting tips regarding migrating Calendar data from MeetingMaker.

**Issue: Unable to import more than one MeetingMaker export file at once.**

**Cause:** Faulty parameter setting in the unimmimprsv.ini file.

**Action:** Make sure to set one timezone per export file in the unimmimprsv.ini file. For example, if timezone is PST8PDT and the NodeID of the Calendar server is 100, the parameter setting in unimmimprsv.ini should be:

```
[100]
```

```
mmexportfilelist={mm1.dat, mm2.dat, mm3.dat}
mmtimezonelist={PST8PDT, PST8PDT, PST8PDT}
```

**Issue: unimmimpsrv runs successfully but no data is imported.**

**Cause:** Missing parameter in the `unimmimpsrv.ini` file.

**Action:** Verify the `unimmimpsrv.ini` file. In particular, verify that you have as many `mmtimezonelist` entries as you have `mmexportfilelist` entries. In addition, verify that the node identifiers are correct for your deployment.

## Troubleshooting Migration Using iCalendar Representation

This section contains the troubleshooting tips regarding migrating Calendar data using iCalendar representation.

**Issue: Using the uniical utility for a day event is returning a specific error message:**

```
uniical [error]: Invalid icalendar data.
```

```
UID = 20040824T084800Z-Fall-Semester-Begins
```

**Cause:** Some iCalendar data in the import file is incorrect. The iCalendar entry can be identified by the UID, when the UID is provided in the iCalendar data.

**Action:** Verify the iCalendar data for the specified UID. In particular, the date format usually causes issues. The log file at `$ORACLE_HOME/ocal/log/uniical.log` would be helpful to diagnose the issue.

For example, the following would be valid date formats:

```
DTSTART:20040824T084800Z
DTEND:20040824T094800Z
```

---

---

# Glossary

## **API**

Application Program Interface (API) is a set of code or tools that is required for developing an application. All the commonly used operating environments like Microsoft Windows and Linux provides APIs that can be used to develop applications that are consistent across a particular operating environment.

## **Applications tier**

The tier of Oracle Collaboration Suite that runs the server applications that provide specific functionality to end users. The term "Applications tier" replaces the term "middle tier" that was used in previous releases. Each Applications tier corresponds to an instance of Oracle Application Server. See also [Oracle Collaboration Suite Applications](#).

## **attendee**

The person who participates in a meeting in Oracle Calendar. An attendee has access to fewer rights than the organizer.

## **Client tier**

The tier of Oracle Collaboration Suite that consists of the end-user applications that reside on client devices, such as desktops, laptops, wireless phones, and PDAs. See also [Oracle Collaboration Suite Applications](#).

## **collapsing domain**

A new domain created from the merger of two existing domains. For example, when you merge `us.acme.com` and `idc.acme.com` to create a single domain called `acme.com`, `acme.com` is called a collapsing domain.

## **DCN**

Domain Configuration Node

## **DN**

A distinguished name is a sequence of relative distinguished names (RDN) separated by commas. A DN is used to refer to an object in an [LDAP](#) directory.

## **iCalendar**

The Internet Calendaring and Scheduling Core Object Specification, or iCalendar, enables you to exchange information normally stored within a calendaring and scheduling application, such as a Personal Information Manager (PIM) or a Group Scheduling product.

**IMAP**

Interactive Mail Access Protocol. A hierarchical mail storage and retrieval structure.

**Infrastructure tier**

The tier of Oracle Collaboration Suite that consists of the components that provide services, such as identity management and metadata storage, for the [Applications tier](#). Components of the Infrastructure tier include [Oracle Collaboration Suite Database](#) and [Oracle Identity Management](#). See also [Oracle Collaboration Suite Infrastructure](#).

**LDAP**

Lightweight Directory Access Protocol (LDAP) is a set of protocols that is used to access information directories. LDAP supports TCP/IP, which is the most common protocol to share data over the Internet.

**LDIF**

Lightweight Directory Interchange Format (LDIF) is an ASCII file format that enables you to exchange data and synchronize that data between [LDAP](#) servers.

**MBOX files**

These files are stored with the extracted data from the source e-mail system. Each folder on the source e-mail system will have a corresponding file on disk, which contains all the messages of this folder. Oracle Collaboration Suite Email Migration Tool reads these files stored on disk for migrating to the target system.

**MTA**

A message transfer agent (MTA) is a computer program that receives incoming e-mail messages and routes them to the proper destinations.

**MX records**

Mail Exchange (MX) record is an entry in a domain name database. It identifies that the mail server that handles e-mails for that domain.

**NDS**

Novell Directory Services (NDS), the directory services for the Novell Netware networks, complies with the X.500 standard. NDS provides a logical tree view of all the resources on a network. Users can use this view to access data over the network without the need to know the actual location of these resources.

**Oracle Collaboration Suite**

An integrated suite of software applications to enable communication, messaging, and content sharing in an enterprise environment. At an architectural level, it includes three tiers: an [Applications tier](#), which consists of server applications that provide the basic functionality, a [Client tier](#), which consists of applications on desktops, laptops, and wireless devices, and an [Infrastructure tier](#), which provides centralized services, such as identity management and metadata storage, for the applications.

**Oracle Collaboration Suite Applications**

The applications that make up Oracle Collaboration Suite, namely:

- Oracle Calendar
- Oracle Collaboration Suite Search
- Oracle Content Services

- Oracle Discussions
- Oracle Mail
- Oracle Mobile Collaboration
- Oracle Real-Time Collaboration
- Oracle Voicemail and Fax
- Oracle Workspaces

Each of the preceding applications is a component of Oracle Collaboration Suite Applications. These applications rely on the services provided by the [Infrastructure tier](#). See also [Applications tier](#).

### **Oracle Collaboration Suite Database**

The default database included with Oracle Collaboration Suite to hold application data and metadata. The Oracle Collaboration Suite Database is part of the [Oracle Collaboration Suite Infrastructure](#).

### **Oracle Collaboration Suite Email Migration Tool**

Oracle Collaboration Suite Email Migration Tool is a GUI-based tool that enables you to migrate e-mail data from various source messaging systems, such as Microsoft Exchange, Lotus Domino, and Samsung Contact Server to Oracle Collaboration Suite.

### **Oracle Collaboration Suite Infrastructure**

The underlying components that support Oracle Collaboration Suite and provide centralized product metadata and security services, configuration information, and data repositories for [Oracle Collaboration Suite Applications](#). Oracle Collaboration Suite Infrastructure uses and builds on OracleAS Infrastructure. It includes the [Oracle Collaboration Suite Database](#) and [Oracle Identity Management](#). See also [Infrastructure tier](#).

### **Oracle Enterprise Manager**

Oracle Enterprise Manager is the Oracle integrated management solution for managing your computing environment. It combines a graphical console, agents, common services, and tools to provide an integrated and comprehensive systems management platform for managing Oracle products.

### **Oracle Identity Management**

An integrated set of components that provide distributed security to Oracle products and make it possible to centrally and securely manage enterprise identities and their access to applications in the enterprise. It includes the following components: Oracle Internet Directory, Oracle Directory Integration and Provisioning, Oracle Delegated Administration Services, OracleAS Single Sign-On, and Oracle Application Server Certificate Authority.

### **Oracle Internet Directory**

Oracle Internet Directory is a general purpose directory service that enables retrieval of information about dispersed users and network resources. Oracle Internet Directory combines LDAP version 4 with the high performance, scalability, robustness, and availability of the Oracle database.

Oracle Internet Directory runs as an application in the Oracle database. It communicates with the database, which may be on the same or a different operating system.

**organizer**

The person who arranges a meeting in Oracle Calendar.

**plug-in**

In the context of Oracle Collaboration Suite migration, a plug-in is a program that interacts with an e-mail source system and generates appropriate objects for use by the migration tool. A plug-in extracts data from a proprietary, legacy message store using the proprietary API, and saves this data in a format that can be interpreted by the migration tool. When all the required files in the appropriate formats have been generated, the plug-in will initiate the migration tool, which will then read these files and perform the migration.

**POA**

Novell Post Office Agent (POA)

**premigration**

It is the first phase of migration data from legacy e-mail systems to Oracle Collaboration Suite. During premigration, all the message bodies, shells and folder details are populated in Oracle Mail schema and full routing is not performed from the source system to Oracle Collaboration Suite. The source system is not disturbed during the premigration and the users can continue to use the source system.

**server-side rules**

Rules and filters of a mailbox that run on the mail server.

**third-party e-mail systems**

E-mail systems, such as Microsoft Exchange/Microsoft Outlook, Novel GroupWise, or Lotus Domino.

**UNC**

Universal Naming Convention or Uniform Naming Convention (UNC) is a computer format that is used for specifying the location of resources on a local area network (LAN).

**uniaddnode**

It is an Oracle Calendar utility that is used to create a calendar server node or reinitialize an existing one.

**uniical**

It is an Oracle Calendar utility that is used to import, export, process, or delete calendar entries to or from a user's agenda using **iCalendar** objects.

**unimmimpsrv**

It is an Oracle Calendar utility that is used to migrate calendar data from MeetingMaker to Oracle Calendar.

**unistart**

It is an Oracle Calendar utility that is used to start up a calendar server or a calendar node.

**unistop**

It is an Oracle Calendar utility that is used to shut down a calendar server or a calendar node.

**uniuser**

It is an Oracle Calendar utility that lists, adds, or deletes calendar users, resources, or event calendars, modify the information associated with them or transfer data from one user to another.





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