

## **Oracle® Identity Manager**

Connector Guide for Novell GroupWise

Release 9.0.4

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# Contents

<b>Preface .....</b>	<b>v</b>
Audience .....	v
Documentation Accessibility .....	v
Related Documents .....	vi
Documentation Updates .....	vi
Conventions .....	vi
 <b>What's New in the Oracle Identity Manager Connector for Novell GroupWise? ..</b>	<b>vii</b>
Software Updates .....	vii
Documentation-Specific Updates.....	ix
 <b>1 About the Connector</b>	
<b>Reconciliation Module .....</b>	<b>1-1</b>
Lookup Fields Reconciliation .....	1-2
User Reconciliation .....	1-2
Reconciled Resource Object Fields .....	1-2
Reconciled Xellerate User Fields.....	1-2
<b>Provisioning Module .....</b>	<b>1-3</b>
<b>Supported Functionality .....</b>	<b>1-3</b>
<b>Multilanguage Support .....</b>	<b>1-4</b>
<b>Files and Directories That Comprise the Connector .....</b>	<b>1-5</b>
<b>Determining the Release Number of the Connector .....</b>	<b>1-6</b>
 <b>2 Deploying the Connector</b>	
<b>Verifying Deployment Requirements .....</b>	<b>2-1</b>
<b>Installing the Connector on Oracle Identity Manager Release 9.1.0 or Later .....</b>	<b>2-2</b>
Running the Connector Installer .....	2-2
Configuring IT Resources .....	2-4
Specifying Values for IT Resource Parameters.....	2-4
GroupWise XRM.....	2-4
eDirectory IT Resource.....	2-5
Groupwise IT Resource.....	2-6
<b>Installing the Connector on Oracle Identity Manager Release 8.5.3.1 through 9.0.3.x .....</b>	<b>2-8</b>
Copying the Connector Files .....	2-8
Importing the Connector XML File .....	2-9

Defining IT Resources .....	2-10
GroupWise XRM.....	2-10
eDirectory IT Resource.....	2-10
Groupwise IT Resource.....	2-11
<b>Configuring the Oracle Identity Manager Server.....</b>	<b>2-14</b>
Configuring the Date Format .....	2-14
Changing to the Required Input Locale.....	2-14
Clearing Content Related to Connector Resource Bundles from the Server Cache .....	2-14
Enabling Logging .....	2-15
<b>Configuring SSL.....</b>	<b>2-17</b>

### **3 Configuring the Connector**

<b>Configuring Reconciliation.....</b>	<b>3-1</b>
Partial Reconciliation .....	3-1
Batched Reconciliation .....	3-3
Configuring Trusted Source Reconciliation.....	3-3
Configuring the Reconciliation Scheduled Tasks.....	3-4
Specifying Values for the Scheduled Task Attributes .....	3-5
User Reconciliation Scheduled Task.....	3-5
Distribution List Lookup Field Reconciliation Scheduled Task .....	3-6
Post Office List Lookup Fields Reconciliation Scheduled Task.....	3-7
<b>Configuring Provisioning.....</b>	<b>3-8</b>

### **4 Testing and Troubleshooting**

<b>Running Test Cases .....</b>	<b>4-1</b>
Testing Partial Reconciliation.....	4-2
Testing Batch-Based Reconciliation.....	4-2
<b>Troubleshooting.....</b>	<b>4-3</b>
Remote Method Invocation Errors .....	4-3
Novell GroupWise Connector Errors.....	4-3

### **5 Known Issues**

#### **A Attribute Mappings Between Oracle Identity Manager and Novell GroupWise**

#### **Index**

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# Preface

*Oracle Identity Manager Connector Guide for Novell GroupWise* provides information about integrating Oracle Identity Manager with Novell GroupWise.

## Audience

This guide is intended for users who want to deploy the Oracle Identity Manager connector for Novell GroupWise.

## Documentation Accessibility

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## Related Documents

For information about installing and using Oracle Identity Manager, see the Oracle Identity Manager documentation library.

For generic information about connectors, see *Oracle Identity Manager Connector Concepts*.

The following Oracle Technology Network page provides links to Oracle Identity Manager documentation:

The following document is available in the Oracle Identity Manager Connector Pack documentation library:

<http://www.oracle.com/technology/documentation/oim.html>

## Documentation Updates

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## Conventions

This document uses the following text conventions:

Convention	Meaning
<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.

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# What's New in the Oracle Identity Manager Connector for Novell GroupWise?

This chapter provides an overview of the updates made to the software and documentation for the Novell GroupWise connector in release 9.0.4.2 of the Oracle Identity Manager connector pack.

**See Also:** The earlier release of this guide for information about updates that were new for that release

The updates discussed in this chapter are divided into the following categories:

- [Software Updates](#)  
These include updates made to the connector software.
- [Documentation-Specific Updates](#)  
These include major changes made to the connector documentation. These changes are not related to software updates.

**See Also:** *Oracle Identity Manager Release Notes*

## Software Updates

The following sections discuss updates made from release 9.0.4 to the current release of the connector:

- [Software Updates in Release 9.0.4.1](#)
- [Software Updates in Release 9.0.4.2](#)

### Software Updates in Release 9.0.4.1

The following is the software update in release 9.0.4.1:

#### Changes in the Directory Structure of the Connector Files on the Installation Media

The `xliGroupWise65.jar` file has been split into two files, `xliGroupWise65.jar` and `xliGroupWiseRecon.jar`. Corresponding changes have been made in the following sections:

- [Files and Directories That Comprise the Connector](#)
- [Determining the Release Number of the Connector](#)
- [Copying the Connector Files](#)

## Software Updates in Release 9.0.4.2

The following are the software updates in release 9.0.4.2:

- [Using the Connector Installer](#)
- [Resolved Issues](#)

### Support for New Target System

From this release onward, the connector adds support for Novell GroupWise 7, 8 as target systems.

These target systems are mentioned in "[Verifying Deployment Requirements](#)".

### Using the Connector Installer

From Oracle Identity Manager release 9.1.0 onward, the Administrative and User Console provides the Connector Installer feature. This feature can be used to automate the connector installation procedure.

See "[Installing the Connector on Oracle Identity Manager Release 9.1.0 or Later](#)" for more information.

### Resolved Issues

The following table lists issues resolved in release 9.0.4.2:

Bug Number	Issue	Resolution
5664763	While provisioning a mailbox to an OIM User, the values in the Visibility list on the process form were displayed in English when a non-English locale was selected for the Oracle Identity Manager deployment.	This issue has been resolved. For non-English locales, the values in the Visibility list on the process form are now being displayed in the respective locales instead of English.
5688673	While creating access policies in the Administrative and User Console, the values of the Participating Type list on the Create Access Policy page were displayed in English even when a non-English locale was selected for the Oracle Identity Manager deployment.	This issue has been resolved. The values of the Participation Type list are now being displayed in the respective locales instead of English.
7623037	Suppose an access policy for provisioning a mailbox to an OIM User was created.  During the Create Mailbox provisioning operation for a large number of users, the Remote Manager stopped functioning as the native code for running this provisioning operation was not thread safe.	This issue has been resolved. The Remote Manager continues to function when mailboxes are simultaneously provisioned to multiple users that meet the criterion specified in the access policy. This is because, the native code has now been made thread safe.
8451826	After a user reconciliation run, the user's distribution list membership information was not displayed on the distribution child form of the target system user's process form..	This issue has been resolved. After a user reconciliation run, the user's membership information is now being displayed.



Bug Number	Issue	Resolution
8509388	When the Novell eDirectory and Novell GroupWise resources were provisioned to an OIM User, and the user and the corresponding mailbox were deleted from Novell eDirectory and Novell Groupwise respectively, the GW_USER_DOES_NOT_EXIST error message was displayed during a Move Post Office provisioning operation with Unknown response received as the detailed error message.	This issue has been resolved. If you perform a Move Post Office provisioning operation after you delete a user from Novell eDirectory and the corresponding mailbox from Novell GroupWise, then the Move PostOffice task displays the following error message:  User does not exist in eDirectory
8521041	After a target resource reconciliation run, the Visibility list of the process form was blank.	This issue has been resolved. The values in the Visibility list of the process form are visible after a target resource reconciliation run.
8521163	During user reconciliation, user records that were not modified were fetched to Oracle Identity Manager and then disabled.	This issue has been resolved. During user reconciliation, user records that are not modified are not fetched in to Oracle Identity Manager.

## Documentation-Specific Updates

The following documentation-specific updates have been made in the guide:

- [Documentation-Specific Updates in Release 9.0.4.1](#)
- [Documentation-Specific Updates in Release 9.0.4.2](#)

### Documentation-Specific Updates in Release 9.0.4.1

There are no documentation-specific updates in this release of the guide.

### Documentation-Specific Updates in Release 9.0.4.2

The following are documentation-specific updates in release 9.0.4.2:

- Some of the sections in the "[Deploying the Connector](#)" chapter have been rearranged.
- The "[Installing the Connector on Oracle Identity Manager Release 9.1.0 or Later](#)" section has been added.
- The "Configuring the Connector for Multiple Installations of the Target System" section has been removed from the "[Configuring the Connector](#)" chapter.
- The "[Known Issues](#)" chapter has been modified.
- In the "[Verifying Deployment Requirements](#)" section, minor changes have been made in the "Target systems" row.



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# About the Connector

Oracle Identity Manager automates access rights management, security, and provisioning of IT resources. Oracle Identity Manager connectors are used to integrate Oracle Identity Manager with third-party applications. This guide discusses the procedure to deploy the connector that is used to integrate Oracle Identity Manager with Novell GroupWise.

This chapter contains the following sections:

- [Reconciliation Module](#)
- [Provisioning Module](#)
- [Supported Functionality](#)
- [Multilanguage Support](#)
- [Files and Directories That Comprise the Connector](#)
- [Determining the Release Number of the Connector](#)

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**Note:** In this guide, the term *Oracle Identity Manager server* refers to the computer on which Oracle Identity Manager is installed.

At some places in this guide, Novell GroupWise has been referred to as the *target system*.

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## 1.1 Reconciliation Module

**Reconciliation** involves duplicating in Oracle Identity Manager the creation of and modifications to user accounts on the target system. It is an automated process initiated by a scheduled task that you configure.

**See Also:** The "Deployment Configurations of Oracle Identity Manager" section in *Oracle Identity Manager Connector Concepts Guide* for conceptual information about reconciliation configurations

Based on the type of data reconciled from the target system, reconciliation can be divided into the following types:

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**Note:** The user search operation is based on the user ID only.

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- [Lookup Fields Reconciliation](#)
- [User Reconciliation](#)

## 1.1.1 Lookup Fields Reconciliation

Lookup fields reconciliation involves reconciling the Distribution List and Post Office List lookup fields.

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**Note:** Fields in the `AttrName.Recon.Map.GW` lookup table that do not begin with the `ldap` prefix cannot have duplicate values.

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## 1.1.2 User Reconciliation

User reconciliation involves reconciling the fields discussed in this section.

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**Note:** Changes in distribution list data and nickname list data are not reconciled because the connector does not update the `modifyTimeStamp` field.

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### 1.1.2.1 Reconciled Resource Object Fields

The following fields are reconciled:

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**Note:** These fields do not have the `ldap` prefix.

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- User ID
- Visibility
- File ID
- Exp Date
- Gateway Account ID
- Gateway Access
- Distribution List
  - Dist List
  - Participation
- Nick Names
  - Nick Name
  - NNVisibility

### 1.1.2.2 Reconciled Xellerate User Fields

The following fields are reconciled only if reconciliation is implemented in trusted mode:

- User ID

The value reconciled into the User ID field is also reconciled into both the First Name and Last name fields.
- Organization
- First Name
- Last Name

- User Type
- Employee Type

## 1.2 Provisioning Module

**Provisioning** involves creating or modifying a user's account on the target system through Oracle Identity Manager. You use the Oracle Identity Manager Administrative and User Console to perform provisioning operations.

**See Also:** The "Deployment Configurations of Oracle Identity Manager" section in *Oracle Identity Manager Connector Concepts Guide* for conceptual information about provisioning

For this target system, the following fields are provisioned:

- User ID
- Visibility
- File ID
- Exp Date
- Gateway Account ID
- Gateway Access
- Distribution List
  - Dist List
  - Participation
- Nick Names
  - Nick Name
  - NNVisibility

## 1.3 Supported Functionality

The following table lists the functions that are available with this connector.

Function	Type	Description
Create Mailbox	Provisioning	Creates a mailbox
Delete Mailbox	Provisioning	Deletes a mailbox
Disable Mailbox	Provisioning	Disables a mailbox
Enable Mailbox	Provisioning	Enables a mailbox
Move Post Office	Provisioning	Moves a user from one post office to another
Update User	Provisioning	Updates the specified Novell GroupWise attribute of a user
Add User To Distribution List	Provisioning	Adds a user to a distribution list
Remove User From Distribution List	Provisioning	Removes a user from a distribution list
Add Nickname to User	Provisioning	Adds a nickname or alias for a user

Function	Type	Description
Delete Nickname of User	Provisioning	Deletes the nickname or alias of a user
Reset User Password	Provisioning	Updates a user's Novell GroupWise password
Create Mailbox	Reconciliation	Adds a mailbox
Delete Mailbox	Reconciliation	Deletes a mailbox
Disable Mailbox	Reconciliation	Disables a mailbox
Enable Mailbox	Reconciliation	Enables a mailbox
Update User	Reconciliation	Updates the user's profile by using user information retrieved from the Novell GroupWise system
Add User To Distribution List	Reconciliation	Adds the user's distribution group membership information by using user information retrieved from the Novell GroupWise system
Remove User From Distribution List	Reconciliation	Removes the user's distribution group membership information by using user information retrieved from the Novell GroupWise system
Add Nickname to User	Reconciliation	Adds the user's nickname information by using user information retrieved from the Novell GroupWise system
Delete Nickname of User	Reconciliation	Removes the user's nickname by using user information retrieved from the Novell GroupWise system

## 1.4 Multilanguage Support

This release of the connector supports the following languages:

- Chinese Simplified
- Chinese Traditional
- Danish
- English
- French
- German
- Italian
- Japanese
- Korean
- Portuguese (Brazilian)
- Spanish

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**Note:** Novell GroupWise does not support the entry of non-ASCII characters. Refer to [Chapter 5, "Known Issues"](#) on page 5-1 for more information about this limitation.

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**See Also:** *Oracle Identity Manager Globalization Guide* for information about supported special characters

## 1.5 Files and Directories That Comprise the Connector

The files and directories that comprise this connector are in the following directory on the installation media:

Collaboration and Messaging Applications/Novell GroupWise

These files and directories are listed and described in [Table 1-1](#).

**Table 1-1 Files and Directories On the Connector Installation Media**

File in the Installation Media Directory	Description
lib/xliGroupWise65.jar	This JAR file contains the class files required for provisioning.
lib/xliGroupWiseRecon.jar	This JAR file contains the class files required for reconciliation.
lib/tcGroupWise65.dll	This DLL file contains the native code required to communicate with the Novell GroupWise client.
Files in the resources directory	Each of these resource bundles contains language-specific information that is used by the connector.  <b>Note:</b> A <b>resource bundle</b> is a file containing localized versions of the text strings that are displayed on the user interface of Oracle Identity Manager. These text strings include GUI element labels and messages displayed on the Administrative and User Console.
test/troubleshoot/tcGroupWise65.dll	This file contains the native code required to interface with Novell GroupWise.
test/troubleshoot/tstGroupWise65.jar	This file contains the wrapper files and the test utility class.
test/troubleshoot/testcreate.bat test/troubleshoot/testmodify.bat test/troubleshoot/testdelete.bat	These batch files are used to run specific tests on the connector. They call the appropriate method in the test utility class.
test/troubleshoot/config.properties	In this configuration file, connection information about Novell eDirectory and Novell GroupWise and other related parameters are specified.
test/troubleshoot/log4j.properties	This file is used to specify the directory in which the log file is to be created when you run the testing utility.
xml/xliGroupwiseResourceObject.xml	This file contains definitions for the following components of the connector: <ul style="list-style-type: none"> <li>IT resource type</li> <li>Process form</li> <li>Process task and rule-generator adapters (along with their mappings)</li> <li>Resource object</li> <li>Provisioning process</li> <li>Pre-populate rules that are used with this connector</li> </ul>
xml/ GroupwiseXLResourceObject.xml	This XML file contains the configuration for the Xellerate User. You must import this file only if you plan to use the connector in trusted source reconciliation mode.

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**Note:** The files in the `test` directory are used only to run tests on the connector.

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The "[Copying the Connector Files](#)" section on page 2-8 provides instructions to copy these files into the required directories.

## 1.6 Determining the Release Number of the Connector

You can use the following method to determine the release number of the connector:

1. Extract the contents of the `xliGroupWise65.jar` file. This file is in the following directory on the installation media:

`Collaboration and Messaging Applications/Novell GroupWise`

2. Open the `manifest.mf` file in a text editor. The `manifest.mf` file is one of the files bundled inside the `xliGroupWise65.jar` file.

In the `manifest.mf` file, the release number of the connector is displayed as the value of the `Version` property.



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## Deploying the Connector

Deploying the connector involves the following steps:

- [Verifying Deployment Requirements](#)
- Depending on the release of Oracle Identity Manager that you use, perform the procedures described in one of the following sections:
  - [Installing the Connector on Oracle Identity Manager Release 9.1.0 or Later](#)
  - [Installing the Connector on Oracle Identity Manager Release 8.5.3.1 through 9.0.3.x](#)
- [Configuring the Oracle Identity Manager Server](#)
- [Configuring SSL](#)

### 2.1 Verifying Deployment Requirements

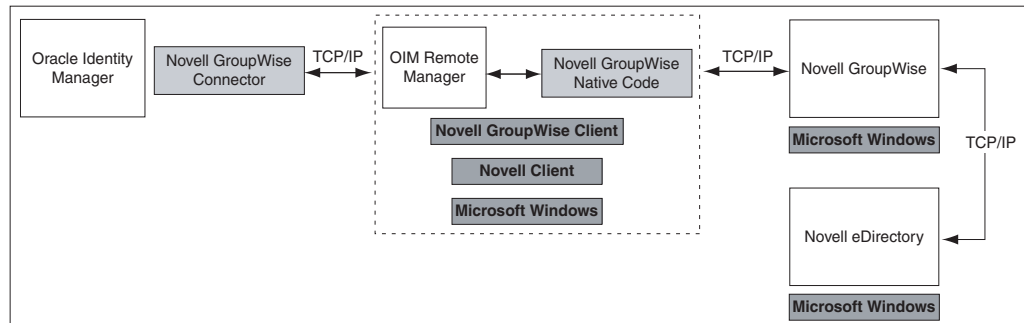
The following table lists the deployment requirements for the connector.

Item	Requirement
Oracle Identity Manager	Oracle Identity Manager release 8.5.3.1 or later
Target systems	Novell GroupWise 6.5, 7, or 8.
Other systems	Novell eDirectory 8.7.3
External code	<code>tcGroupWise65.dll</code> , <code>ldap.jar</code> , <code>ldapbp.jar</code> <b>Note:</b> The <code>tcGroupWise65.dll</code> is bundled with the rest of the connector installation files on the installation media.
Target system user account	Novell GroupWise user account to which the Supervisor right has been assigned  You provide the credentials of this user account while performing the procedure in the " <a href="#">Defining IT Resources</a> " section on page 2-10.  If this target system user account is not assigned the specified rights, then the following error message may be displayed during connector operations:  <code>Transaction is not active (Transaction Manager error)</code>

In addition to the requirements listed in this table, you must also ensure that Novell Client and the remote manager are installed and running.

**See Also:** *Oracle Identity Manager Installation Guide* for instructions about installing the remote manager

The following diagram shows the operating environment architecture of the connector:



Novell GroupWise Client, Novell Client, and the remote manager must be installed on the same computer. If required, you can install all three products and Oracle Identity Manager on the same Microsoft Windows computer.

## 2.2 Installing the Connector on Oracle Identity Manager Release 9.1.0 or Later

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**Note:** In this guide, the term **Connector Installer** has been used to refer to the Connector Installer feature of the Oracle Identity Manager Administrative and User Console.

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Installing the connector on Oracle Identity Manager release 9.1.0 or later involves the following procedure:

- [Running the Connector Installer](#)
- [Configuring IT Resources](#)

### 2.2.1 Running the Connector Installer

To run the Connector Installer:

1. Copy the contents of the connector installation media into the following directory:  
`OIM_HOME/xellerate/ConnectorDefaultDirectory`
2. Log in to the Administrative and User Console by using the user account described in the "Creating the User Account for Installing Connectors" section of *Oracle Identity Manager Administrative and User Console Guide*.
3. Click **Deployment Management**, and then click **Install Connector**.
4. From the Connector List list, select **Novell GroupWise RELEASE\_NUMBER**. This list displays the names and release numbers of connectors whose installation files you copy into the default connector installation directory:

`OIM_HOME/xellerate/ConnectorDefaultDirectory`

If you have copied the installation files into a different directory, then:

- a. In the **Alternative Directory** field, enter the full path and name of that directory.
- b. To repopulate the list of connectors in the Connector List list, click **Refresh**.
- c. From the Connector List list, select **Novell GroupWise RELEASE\_NUMBER**.

5. Click **Load**.

6. To start the installation process, click **Continue**.

The following tasks are performed in sequence:

- a. Configuration of connector libraries
- b. Import of the connector Target Resource user configuration XML file (by using the Deployment Manager). If you want to import the target system as a trusted source for reconciliation, then see the "[Configuring Trusted Source Reconciliation](#)" section on page 3-3 for more information.

c. Compilation of adapters

On successful completion of a task, a check mark is displayed for the task. If a task fails, then an X mark and a message stating the reason for failure are displayed. Depending on the reason for the failure, make the required correction and then perform one of the following steps:

- Retry the installation by clicking **Retry**.
  - Cancel the installation and begin again from Step 1.
7. If all three tasks of the connector installation process are successful, then a message indicating successful installation is displayed. In addition, a list of the steps that you must perform after the installation is displayed. These steps are as follows:
- a. Ensuring that the prerequisites for using the connector are addressed

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**Note:** At this stage, run the PurgeCache utility to load the server cache with content from the connector resource bundle in order to view the list of prerequisites. Refer to "[Clearing Content Related to Connector Resource Bundles from the Server Cache](#)" on page 2-14 for information about running the PurgeCache utility.

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There are no prerequisites for some predefined connectors.

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b. Configuring the IT resource for the connector

Record the name of the IT resource displayed on this page. The procedure to configure the IT resource is described later in this guide.

c. Configuring the scheduled tasks that are created when you installed the connector

Record the names of the scheduled tasks displayed on this page. The procedure to configure these scheduled tasks is described later in this guide.

When you run the Connector Installer, it copies the connector files and external code files to destination directories on the Oracle Identity Manager host computer. These files are listed in [Table 1-1](#).

### Installing the Connector in an Oracle Identity Manager Cluster

While installing Oracle Identity Manager in a clustered environment, you must copy all the JAR files and the contents of the `connectorResources` directory into the

corresponding directories on each node of the cluster. See [Table 1–1](#) for information about the files that you must copy and their destination locations on the Oracle Identity Manager server.

## 2.2.2 Configuring IT Resources

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**Note:** Perform this procedure if you are installing the connector on Oracle Identity Manager release 9.1.0 or later.

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You must specify values for the parameters of the GroupWise XRM, eDirectory IT Resource, and Groupwise IT Resource IT resource as follows:

1. Log in to the Administrative and User Console
2. Expand **Resource Management**.
3. Click **Manage IT Resource**.
4. In the IT Resource Name field on the Manage IT Resource page, enter GroupWise XRM and then click **Search**.
5. Click the edit icon for the IT resource.
6. From the list at the top of the page, select **Details and Parameters**.
7. Specify values for the parameters of the GroupWise XRM IT resource. Refer to the table in the "[Specifying Values for IT Resource Parameters](#)" on page 2-4 for information about the values to be specified.
8. To save the values, click **Update**.
9. On the View IT Resource Details and Parameters page, click **Back to Search Results**.
10. Repeat Steps 4 through 9 for the Groupwise IT Resource and eDirectory IT Resource IT resources.

### 2.2.2.1 Specifying Values for IT Resource Parameters

This section provides information about the parameters for the following IT resources:

- [GroupWise XRM](#)
- [eDirectory IT Resource](#)
- [Groupwise IT Resource](#)

**2.2.2.1.1 GroupWise XRM** You must specify values for the Groupwise XRM IT resource parameters listed in the following table.

Parameter	Description
Service Name	Name of the remote manager Default value: RManager
URL	Host name or IP address of the server hosting the remote manager Sample value: //10.0.0.1:12345

After you specify values for these IT resource parameters, proceed to Step 8 of the procedure to configure IT resources.

**2.2.2.1.2 eDirectory IT Resource** You must specify values for the eDirectory IT Resource IT resource parameters listed in the following table.

Parameter	Description
Admin Id	<p>DN of the user who has administrator rights on the target LDAP</p> <p>If this administrator has read/search rights, then that would be sufficient because this administrator is used only to search for existing users and no modification is done in Novell eDirectory.</p> <p>Sample value: cn=Admin,ou=People, o=xyz</p>
Admin Password	<p>Password of the administrator</p> <p>Sample value: password</p>
Server Address	Host name or IP address of the server hosting Novell eDirectory
Root DN	<p>Base DN from where the search for the user starts</p> <p>Sample value: o=xyz</p>
Port	<p>Port number of the Novell eDirectory server</p> <p>Sample value: 389</p>
SSL	<p>Specifies whether or not SSL is to be used to secure communication between Oracle Identity Manager and Novell GroupWise</p> <p>The value can be true or false. If it is set to true, then you must import the certificate of the Novell eDirectory server into the Oracle Identity Manager server.</p> <p><b>Note:</b> It is recommended that you enable SSL to secure communication with the target system.</p>
Last Recon TimeStamp	<p>For the first reconciliation run, the time stamp value is not set. For subsequent rounds of reconciliation, the time at which the previous round of reconciliation was completed is stored in this parameter.</p> <p>Sample value: 2006-06-02 12:08:06</p>
Prov Attribute Lookup Code	<p>Name of the lookup definition that has the target attribute mappings required for provisioning</p> <p>The value must be AttrName.Prov.Map.EDIR.</p>
Recon Attribute Lookup Code	<p>Name of the lookup definition that has the target attribute mappings required for reconciliation</p> <p>The value must be AttrName.Recon.Map.EDIR.</p>
Use XL Org Structure	<p>If set to true, then the Oracle Identity Manager Organization structure is used during provisioning and reconciliation.</p> <p>If set to false, then the value of the Organization field in the process form is used for provisioning and the organization or container in the target Oracle Internet Directory is used for reconciliation.</p>

After you specify values for these IT resource parameters, proceed to Step 8 of the procedure to configure IT resources.

**2.2.2.1.3 Groupwise IT Resource** You must specify values for the Groupwise IT Resource IT resource parameters listed in the following table.

Parameter	Description
GroupWise Domain DN or Path	Refer to " <a href="#">GroupWise Domain DN or Path</a> " on page 2-13 for detailed information about this parameter.
Admin User ID	<p>DN of the user who has administrator rights on the target Novell GroupWise server</p> <p>This administrator must have read/write access to the Novell GroupWise system/domain database.</p> <p>Ensure that this DN is entered in the dot format and not in the comma format. For example:</p> <p><code>cn=admin.ou=admgrp</code> (Correct)</p> <p><code>cn=admin,ou=admgrp</code> (Incorrect)</p>
Admin Password	Password of the administrator
eDir Context	<p>The Novell eDirectory context below which the administrator is present. The administrator ID plus this context should be the complete DN of the administrator. This context is usually one level below the eDirectory tree.</p> <p>For example:</p> <p>Suppose the DN of the administrator is as follows:</p> <p><code>cn=admin.ou=admgrp.o=marketing</code></p> <p>Then, the value of this parameter can be either <code>o=marketing</code> or <code>marketing</code>.</p>
eDir Server Address	Host name or IP address of the server hosting Novell eDirectory
eDir Tree	<p>Name of the Novell eDirectory tree under which the Novell GroupWise domain and the administrator are present</p> <p>This is the topmost level in Novell eDirectory.</p> <p>Sample value: <code>ExampleWidgets</code></p>
UseEDirAuth	<p>Specifies whether the target Novell GroupWise uses the Novell eDirectory password or the Novell GroupWise password for authentication.</p> <p>If it is set to <code>true</code>, then the password is sent as an empty string when the Create Mailbox and Change User password/Reset Password functions are run. The password specified by the user is ignored. If it is set to <code>false</code>, then the password specified is set as the mailbox password.</p>
Last Recon TimeStamp	The value is empty for the first reconciliation run. After that, the time at which the last reconciliation run was completed is stored in this parameter.
Recon Attribute Lookup Code	<p>Contains the target attributes to be reconciled</p> <p>Sample lookup definition:</p> <p><code>AttrName.Recon.Map.GW</code></p>

Parameter	Description
CustomizedReconQuery	<p>Query condition on which reconciliation must be based</p> <p>If you specify a query condition for this parameter, then the target system records are searched based on the query condition.</p> <p>If you want to reconcile all the target system records, then do not specify a value for this parameter.</p> <p>The query can be composed with the AND (&amp;) and OR ( ) logical operators.</p> <p>Sample value: <code>givenname=John</code></p> <p>For more information about this parameter, refer to the "<a href="#">Partial Reconciliation</a>" section on page 3-1.</p>

### GroupWise Domain DN or Path

The complete DN of the Novell GroupWise domain or the path of the domain folder must be specified in one of the following ways:

#### ■ Local System Path

The local system path can be specified in any one of the following ways:

- By using the Domain DN path as follows:

Domain DN: `'cn=GWdomain.ou=org_unit_name.dc=companyname.dc=com.o=org_name'`

For example:

Domain DN: `'cn=MyGWdomain.ou=MyDomains.dc=ExampleWidgets.dc=com.o=EXAMPLE'`

---

**Note:** Use dots (not commas) to separate the object classes as shown in the preceding example.

---

- By using the local directory path as follows:

`drive:\\domain_directory_path`

For example:

`f:\\groupwise\\testdomain`

#### ■ UNC Path

The UNC path can be specified in any one of the following ways:

- By using the host name as follows

`\\hostname\\share\\domainfolder`

For example

`\\testsvr\\myshare\\testdomain`

- By using the IP address as follows:

`\\IPaddress\\share_name\\domain_name`

For example:

`\\10.0.0.1\\myshare\\testdomain`

The recommended method is to use the DN or the local directory path. If the domain is on a different computer, then map that folder locally and mention the local path. Use this method if you are not able to connect to the domain by using the DN.

After you specify values for these IT resource parameters, proceed to Step 8 of the procedure to configure IT resources.

## 2.3 Installing the Connector on Oracle Identity Manager Release 8.5.3.1 through 9.0.3.x

Installing the connector on any Oracle Identity Manager release between release 8.5.3.1 through 9.0.3.x involves the following procedures:

- [Copying the Connector Files](#)
- [Importing the Connector XML File](#)

### 2.3.1 Copying the Connector Files

The connector files to be copied and the directories to which you must copy them are given in the following table.

---

---

**Note:** The directory paths given in the first column of this table correspond to the location of the connector files in the following directory on the installation media:

Collaboration and Messaging Applications/Novell GroupWise

Refer to the "[Files and Directories That Comprise the Connector](#)" section on page 1-5 for more information about these files.

---

---

File in the Installation Media Directory	Destination Directory
lib/xliGroupWise65.jar	OIM_HOME/xellerate/JavaTasks
lib/xliGroupWiseRecon.jar	OIM_HOME/xellerate/ScheduleTask
lib/tcGroupWise65.dll	Copy this DLL file into a directory that is included in the PATH environment variable on the remote manager server.
Files in the resources directory	OIM_HOME/xellerate/connectorResources
Files in the test/troubleshoot directory	OIM_HOME/xellerate/groupwise/test/troubleshoot
Files in the xml directory	OIM_HOME/xellerate/groupwise/xml

To copy the ldap.jar file into the required directory:

1. Log on to the Novell Web site at  
[http://developer.novell.com/wiki/index.php/Special:Downloads/jldap/builds/netware\\_windows/](http://developer.novell.com/wiki/index.php/Special:Downloads/jldap/builds/netware_windows/)
2. Download the following file from the Novell Web site:  
novell-jldap-devel-2005.10.03-1netware\_windows.zip



The size of the file is 11.1 MB.

3. Extract the contents of the file that you downloaded in Step 2.
4. Copy the `ldap.jar` file from the `novell-jldap-devel-2005.10.03-1netware_windows\jldap_2005.10.03\lib` directory to the `OIM_HOME\xellerate\ThirdParty` directory on the Oracle Identity Manager server.

To copy the `ldapbp.jar` file into the required directory:

1. Log on the Sun Web site at  
<http://java.sun.com/products/jndi/downloads/index.html>
2. Click the **Download JNDI 1.2.1 & More** button.
3. From the table on the page that is displayed, select the **LDAP Service Provider 1.2.4** check box and download the `ldap-1_2_4.zip` file.
4. Extract the `ldapbp.jar` file from the `ldap-1_2_4.zip` file.
5. Copy the `ldapbp.jar` file into the `OIM_HOME/xellerate/ThirdParty` directory on the Oracle Identity Manager server.

---

**Note:** While installing Oracle Identity Manager in a clustered environment, you copy the contents of the installation directory to each node of the cluster. Similarly, you must copy the contents of the `connectorResources` directory and the JAR files to the corresponding directories on each node of the cluster.

---

## 2.3.2 Importing the Connector XML File

As mentioned in the "[Files and Directories That Comprise the Connector](#)" section on page 1-5, the connector XML file contains definitions of the components of the connector. By importing the connector XML file, you create these components in Oracle Identity Manager.

To import the connector XML file into Oracle Identity Manager:

1. Open the Oracle Identity Manager Administrative and User Console.
2. Click the **Deployment Management** link on the left navigation bar.
3. Click the **Import** link under Deployment Management. A dialog box for opening files is displayed.
4. Locate and open the `xliGroupwiseResourceObject.xml` file, which is in the `OIM_HOME/xellerate/groupwise/xml` directory. Details of this XML file are shown on the File Preview page.
5. Click **Add File**. The Substitutions page is displayed.
6. Click **Next**. The Confirmation page is displayed.
7. Click **Next**. The Provide IT Resource Instance Data page for the GroupWise XRM IT resource is displayed.
8. Specify values for the parameters of the GroupWise XRM IT resource. Refer to the table in the "[Defining IT Resources](#)" section on page 2-10 for information about the values to be specified.

9. Click **Next**. The Provide IT Resource Instance Data page for a new instance of the Remote Manager resource type is displayed.
10. Repeat Steps 7, 8, and 9 for the Groupwise IT Resource and eDirectory IT Resource IT resources.
11. Click **Skip** to specify that you do not want to define another IT resource. The Confirmation page is displayed.

**See Also:** If you want to define another IT resource, then refer to *Oracle Identity Manager Administrative and User Console Guide* for instructions.

12. Click **View Selections**.

The contents of the XML file are displayed on the Import page. You *may* see a cross-shaped icon along with some nodes. These nodes represent Oracle Identity Manager entities that are redundant. Before you import the connector XML file, you must remove these entities by right-clicking each node and then selecting **Remove**.

13. Click **Import**. The connector file is imported into Oracle Identity Manager.

After you import the connector XML file, proceed to the "[GroupWise Domain DN or Path](#)" section on page 2-13.

### 2.3.2.1 Defining IT Resources

This section provides information about the parameters for the following IT resources:

- [GroupWise XRM](#)
- [eDirectory IT Resource](#)
- [Groupwise IT Resource](#)

**2.3.2.1.1 GroupWise XRM** You must specify values for the Groupwise XRM IT resource parameters listed in the following table.

Parameter	Description
Service Name	Name of the remote manager Default value: RManager
URL	Host name or IP address of the server hosting the remote manager Sample value: //10.0.0.1:12345

After you specify values for these IT resource parameters, proceed to Step 9 of the procedure to import connector XML files.

**2.3.2.1.2 eDirectory IT Resource** You must specify values for the eDirectory IT Resource IT resource parameters listed in the following table.

Parameter	Description
Admin Id	<p>DN of the user who has administrator rights on the target LDAP</p> <p>If this administrator has read/search rights, then that would be sufficient because this administrator is used only to search for existing users and no modification is done in Novell eDirectory.</p> <p>Sample value: cn=Admin, ou=People, o=xyz</p>
Admin Password	<p>Password of the administrator</p> <p>Sample value: password</p>
Server Address	Host name or IP address of the server hosting Novell eDirectory
Root DN	<p>Base DN from where the search for the user starts</p> <p>Sample value: o=xyz</p>
Port	<p>Port number of the Novell eDirectory server</p> <p>Sample value: 389</p>
SSL	<p>Specifies whether or not SSL is to be used to secure communication between Oracle Identity Manager and Novell GroupWise</p> <p>The value can be true or false. If it is set to true, then you must import the certificate of the Novell eDirectory server into the Oracle Identity Manager server.</p> <p><b>Note:</b> It is recommended that you enable SSL to secure communication with the target system.</p>
Last Recon TimeStamp	<p>For the first reconciliation run, the time stamp value is not set. For subsequent rounds of reconciliation, the time at which the previous round of reconciliation was completed is stored in this parameter.</p> <p>Sample value: 2006-06-02 12:08:06</p>
Prov Attribute Lookup Code	<p>Name of the lookup definition that has the target attribute mappings required for provisioning</p> <p>The value must be AttrName.Prov.Map.EDIR.</p>
Recon Attribute Lookup Code	<p>Name of the lookup definition that has the target attribute mappings required for reconciliation</p> <p>The value must be AttrName.Recon.Map.EDIR.</p>
Use XL Org Structure	<p>If set to true, then the Oracle Identity Manager Organization structure is used during provisioning and reconciliation.</p> <p>If set to false, then the value of the Organization field in the process form is used for provisioning and the organization or container in the target Oracle Internet Directory is used for reconciliation.</p>

After you specify values for these IT resource parameters, proceed to Step 9 of the procedure to import connector XML files.

**2.3.2.1.3 Groupwise IT Resource** You must specify values for the Groupwise IT Resource IT resource parameters listed in the following table.

Parameter	Description
GroupWise Domain DN or Path	Refer to <a href="#">"GroupWise Domain DN or Path"</a> on page 2-13 for detailed information about this parameter.
Admin User ID	<p>DN of the user who has administrator rights on the target Novell GroupWise server</p> <p>This administrator must have read/write access to the Novell GroupWise system/domain database.</p> <p>Ensure that this DN is entered in the dot format and not in the comma format. For example:</p> <p><code>cn=admin.ou=admgrp</code> (Correct)</p> <p><code>cn=admin,ou=admgrp</code> (Incorrect)</p>
Admin Password	Password of the administrator
eDir Context	<p>The Novell eDirectory context below which the administrator is present. The administrator ID plus this context should be the complete DN of the administrator. This context is usually one level below the eDirectory tree.</p> <p>For example:</p> <p>Suppose the DN of the administrator is as follows:</p> <p><code>cn=admin.ou=admgrp.o=marketing</code></p> <p>Then, the value of this parameter can be either <code>o=marketing</code> or <code>marketing</code>.</p>
eDir Server Address	Host name or IP address of the server hosting Novell eDirectory
eDir Tree	<p>Name of the Novell eDirectory tree under which the Novell GroupWise domain and the administrator are present</p> <p>This is the topmost level in Novell eDirectory.</p> <p>Sample value: <code>ExampleWidgets</code></p>
UseEDirAuth	<p>Specifies whether the target Novell GroupWise uses the Novell eDirectory password or the Novell GroupWise password for authentication.</p> <p>If it is set to <code>true</code>, then the password is sent as an empty string when the Create Mailbox and Change User password/Reset Password functions are run. The password specified by the user is ignored. If it is set to <code>false</code>, then the password specified is set as the mailbox password.</p>
Last Recon TimeStamp	The value is empty for the first reconciliation run. After that, the time at which the last reconciliation run was completed is stored in this parameter.
Recon Attribute Lookup Code	<p>Contains the target attributes to be reconciled</p> <p>Sample lookup definition:</p> <p><code>AttrName.Recon.Map.GW</code></p>

Parameter	Description
CustomizedReconQuery	<p>Query condition on which reconciliation must be based</p> <p>If you specify a query condition for this parameter, then the target system records are searched based on the query condition.</p> <p>If you want to reconcile all the target system records, then do not specify a value for this parameter.</p> <p>The query can be composed with the AND (&amp;) and OR ( ) logical operators.</p> <p>Sample value: <code>givenname=John</code></p> <p>For more information about this parameter, refer to the "<a href="#">Partial Reconciliation</a>" section on page 3-1.</p>

### GroupWise Domain DN or Path

The complete DN of the Novell GroupWise domain or the path of the domain folder must be specified in one of the following ways:

#### ■ Local System Path

The local system path can be specified in any one of the following ways:

- By using the Domain DN path as follows:

Domain DN: `'cn=GWdomain.ou=org_unit_name.dc=companyname.dc=com.o=org_name'`

For example:

Domain DN: `'cn=MyGWdomain.ou=MyDomains.dc=ExampleWidgets.dc=com.o=EXAMPLE'`

---

**Note:** Use dots (not commas) to separate the object classes as shown in the preceding example.

---

- By using the local directory path as follows:

`drive:\\domain_directory_path`

For example:

`f:\\groupwise\\testdomain`

#### ■ UNC Path

The UNC path can be specified in any one of the following ways:

- By using the host name as follows

`\\hostname\\share\\domainfolder`

For example

`\\testsvr\\myshare\\testdomain`

- By using the IP address as follows:

`\\IPaddress\\share_name\\domain_name`

For example:

`\\10.0.0.1\\myshare\\testdomain`

The recommended method is to use the DN or the local directory path. If the domain is on a different computer, then map that folder locally and mention the local path. Use this method if you are not able to connect to the domain by using the DN.

After you specify values for these IT resource parameters, proceed to Step 9 of the procedure to import connector XML files.

## 2.4 Configuring the Oracle Identity Manager Server

Configuring the Oracle Identity Manager server involves performing the following procedures:

---

---

**Note:** In a clustered environment, you must perform this step on each node of the cluster.

---

---

- [Configuring the Date Format](#)
- [Changing to the Required Input Locale](#)
- [Clearing Content Related to Connector Resource Bundles from the Server Cache](#)
- [Enabling Logging](#)

### 2.4.1 Configuring the Date Format

You must perform the following steps to configure the date format on the Oracle Identity Manager server:

1. Open the Oracle Identity Manager Design Console.
2. Open the Xellerate Administration/System Configuration form.
3. Add a new entry in the *Server* category. The following are the details:  
Name: `Default date format`  
Keyword: `XL.DefaultDateFormat`  
Value: `yyyy-MM-dd hh:mm:ss`
4. Click **Save**.

### 2.4.2 Changing to the Required Input Locale

Changing to the required input locale (language and country setting) involves installing the required fonts and setting the required input locale.

You may require the assistance of the system administrator to change to the required input locale.

### 2.4.3 Clearing Content Related to Connector Resource Bundles from the Server Cache

While performing the instructions described in the "[Copying the Connector Files](#)" section on page 2-8, you copy files from the `resources` directory on the installation media into the `OIM_HOME/xellerate/connectorResources` directory. Whenever you add a new resource bundle in the `connectorResources` directory or make a change in an existing resource bundle, you must clear content related to connector resource bundles from the server cache.

To clear content related to connector resource bundles from the server cache:

1. In a command window, change to the `OIM_HOME/xellerate/bin` directory.

---

**Note:** You must perform Step 1 before you perform Step 2. An exception is thrown if you run the command described in Step 2 as follows:

---

```
OIM_HOME/xellerate/bin/batch_file_name
```

---

2. Enter one of the following commands:

- On Microsoft Windows:

```
PurgeCache.bat ConnectorResourceBundle
```

- On UNIX:

```
PurgeCache.sh ConnectorResourceBundle
```

---

**Note:** You can ignore the exception that is thrown when you perform Step 2.

---

In this command, `ConnectorResourceBundle` is one of the content categories that you can remove from the server cache. Refer to the following file for information about the other content categories:

```
OIM_HOME/xellerate/config/xlConfig.xml
```

## 2.4.4 Enabling Logging

When you enable logging, Oracle Identity Manager automatically stores in a log file information about events that occur during the course of provisioning and reconciliation operations. To specify the type of event for which you want logging to take place, you can set the log level to one of the following:

- ALL

This level enables logging for all events.

- DEBUG

This level enables logging of information about fine-grained events that are useful for debugging.

- INFO

This level enables logging of messages that highlight the progress of the application at a coarse-grained level.

- WARN

This level enables logging of information about potentially harmful situations.

- ERROR

This level enables logging of information about error events that may allow the application to continue running.

- FATAL

This level enables logging of information about very severe error events that could cause the application to stop functioning.

- OFF

This level disables logging for all events.

The file in which you set the log level and the log file path depend on the application server that you use:

- **BEA WebLogic Server**

To enable logging:

1. Add the following lines in the *OIM\_HOME/xellerate/config/log.properties* file:  

```
log4j.logger.XELLERATE=log_level
log4j.logger.XL_INTG.GROUPWISE=log_level
```
2. In these lines, replace *log\_level* with the log level that you want to set.

For example:

```
log4j.logger.XELLERATE=INFO
log4j.logger.XL_INTG.GROUPWISE=INFO
```

After you enable logging, the log information is written to the following file:

*WebLogic\_home/user\_projects/domains/domain\_name/server\_name/server\_name.log*

- **IBM WebSphere Application Server**

To enable logging:

1. Add the following lines in the *OIM\_HOME/xellerate/config/log.properties* file:  

```
log4j.logger.XELLERATE=log_level
log4j.logger.XL_INTG.GROUPWISE=log_level
```
2. In these lines, replace *log\_level* with the log level that you want to set.

For example:

```
log4j.logger.XELLERATE=INFO
log4j.logger.XL_INTG.GROUPWISE=INFO
```

After you enable logging, the log information is written to the following file:

*WebSphere\_home/AppServer/logs/server\_name/startServer.log*

- **JBoss Application Server**

To enable logging:

1. In the *JBoss\_home/server/default/conf/log4j.xml* file, locate or add the following lines:

```
<category name="XELLERATE">
  <priority value="log_level"/>
</category>

<category name="XL_INTG.GROUPWISE">
  <priority value="log_level"/>
</category>
```



2. In the second XML code line of each set, replace *log\_level* with the log level that you want to set. For example:

```
<category name="XELLERATE">
  <priority value="INFO"/>
</category>

<category name="XL_INTG.GROUPWISE">
  <priority value="INFO"/>
</category>
```

After you enable logging, the log information is written to the following file:

*JBoss\_home/server/default/log/server.log*

## ■ Oracle Application Server

To enable logging:

1. Add the following lines in the *OIM\_HOME/xellerate/config/log.properties* file:

```
log4j.logger.XELLERATE=log_level
log4j.logger.XL_INTG.GROUPWISE=log_level
```

2. In these lines, replace *log\_level* with the log level that you want to set.

For example:

```
log4j.logger.XELLERATE=INFO
log4j.logger.XL_INTG.GROUPWISE=INFO
```

After you enable logging, the log information is written to the following file:

*OC4J\_home/opmn/logs/default\_group-home~default\_group~1.log*

## 2.5 Configuring SSL

---

**Note:** This is an optional step of the deployment procedure.

---

To set up SSL connectivity between Oracle Identity Manager and the Novell GroupWise server:

1. Import the certificate from the target system into the JSDK (the JSDK that is used during installation of Oracle Identity Manager) *cacerts* keystore as follows:

```
keytool -import -alias alias_name -file certificate_file_name_with_complete_
path -keystore java_home/jre/lib/security/cacerts
```

Here, *java\_home* is the JDK directory used for Oracle Identity Manager.

2. Restart Oracle Identity Manager.
3. In the eDirectory IT Resource IT resource:
  - Set the SSL parameter value to *true*.
  - Set the Port parameter value to the SSL port number. Typically, this number is 636.



---

## Configuring the Connector

After you deploy the connector, you must configure it to meet your requirements. This chapter discusses the following connector configuration procedures:

---

**Note:** These sections provide both conceptual and procedural information about configuring the connector. It is recommended that you read the conceptual information before you perform the procedures.

---

- [Configuring Reconciliation](#)
- [Configuring Provisioning](#)

### 3.1 Configuring Reconciliation

As mentioned earlier in this guide, reconciliation involves duplicating in Oracle Identity Manager the creation of and modifications to user accounts on the target system. This section discusses the following topics related to configuring reconciliation:

- [Partial Reconciliation](#)
- [Batched Reconciliation](#)
- [Configuring Trusted Source Reconciliation](#)
- [Configuring the Reconciliation Scheduled Tasks](#)

#### 3.1.1 Partial Reconciliation

By default, all target system records that are added or modified after the last reconciliation run are reconciled during the current reconciliation run. You can customize this process by specifying the subset of added or modified target system records that must be reconciled. You do this by creating filters for the reconciliation module.

For this connector, you create a filter by specifying values for the `CustomizedReconQuery` IT resource parameter while performing the procedure described in the ["Defining IT Resources"](#) section on page 2-10.

The following table lists the Novell GroupWise attributes, and the corresponding Oracle Identity Manager attributes, that you can use to build the query condition. You specify this query condition as the value of the `CustomizedReconQuery` parameter.

Oracle Identity Manager Attribute	Novell GroupWise Attribute
User ID	cn
File ID	nGWFileID
Account ID	nGWAccountID
Gateway Access	nGWGatewayAccess

The following are sample query conditions:

- Value assigned to the `CustomizedReconQuery` parameter: `cn=JOHN|cn=JANE`  
The user with user ID JOHN and JANE are reconciled.
- Value assigned to the `CustomizedReconQuery` parameter: `nGWFileID=f06|nGWFileID=s1z`  
The users with File ID f06 and s1z are reconciled.

If you do not specify values for the `CustomizedReconQuery` parameter, then all the records in the target system are compared with existing Oracle Identity Manager records during reconciliation.

The following are guidelines to be followed while specifying a value for the `CustomizedReconQuery` parameter:

- For the target system attributes, you must use the same case (uppercase or lowercase) as given in the table shown earlier in this section. This is because the attribute names are case-sensitive.
- You must not include unnecessary blank spaces between operators and values in the query condition.

A query condition with spaces separating values and operators would yield different results as compared to a query condition that does not contain spaces between values and operators. For example, the output of the following query conditions would be different:

```
cn=John
```

```
cn= John
```

In the second query condition, the reconciliation engine would look for first name and last name values that contain a space at the start.

- You must not include special characters other than the equal sign (=), ampersand (&), and vertical bar (|) in the query condition.

---

**Note:** An exception is thrown if you include special characters other than the equal sign (=), ampersand (&), and vertical bar (|).

---

- The query condition must be an expression without any braces.
- Searching users based on more than three user attributes are not supported. For example, if the query condition is `cn=JOHN&nGWFileID=f06&nGWGatewayAccess=Sublm|nGWAccountID=23`, then the query generates an error.

You specify a value for the `CustomizedReconQuery` parameter while performing the procedure described in the ["Defining IT Resources"](#) section on page 2-10.

### 3.1.2 Batched Reconciliation

During a reconciliation run, all changes in the target system records are reconciled into Oracle Identity Manager. Depending on the number of records to be reconciled, this process may require a large amount of time. In addition, if the connection breaks during reconciliation, then the process would take longer to complete.

You can configure batched reconciliation to avoid such problems.

To configure batched reconciliation, you must specify values for the following user reconciliation scheduled task attributes:

- **StartRecord:** Use this attribute to specify the record number from which batched reconciliation must begin.
- **BatchSize:** Use this attribute to specify the number of records that must be included in each batch.
- **NumberOfBatches:** Use this attribute to specify the total number of batches that must be reconciled. If you do not want to use batched reconciliation, specify `All Available` as the value of this attribute.

---

**Note:** If you specify `All Available` as the value of this attribute, then the values of the `StartRecord` and `BatchSize` attributes are ignored.

---

You specify values for these attributes by following the instructions described in the ["User Reconciliation Scheduled Task"](#) section on page 3-5.

After you configure batched reconciliation, if reconciliation fails during a batched reconciliation run, then refer to the log file for information about the batch at which reconciliation has failed. The log file provides the following information about batched reconciliation:

- Serial numbers of the batches that have been successfully reconciled
- User IDs associated with the records with each batch that has been successfully reconciled
- If the batched reconciliation run fails, then the serial number of the batch that has failed

### 3.1.3 Configuring Trusted Source Reconciliation

While configuring the connector, the target system can be designated as a trusted source or target resource. If you designate the target system as a **trusted source**, then both newly created and modified user accounts are reconciled in Oracle Identity Manager. If you designate the target system as a **target resource**, then only modified user accounts are reconciled in Oracle Identity Manager.

---

**Note:** You can skip this section if you do not want to designate the target system as a trusted source for reconciliation.

---

Configuring trusted source reconciliation involves the following steps:

1. Import the XML file for trusted source reconciliation, `GroupwiseXMLResourceObject.xml`, by using the Deployment Manager. This section describes the procedure to import the XML file.

---

**Note:** Only one target system can be designated as a trusted source. If you import the `GroupwiseXMLResourceObject.xml` file while you have another trusted source configured, then both connector reconciliations would stop working.

---

2. Set the `TrustedSource` scheduled task attribute to `True`. You specify a value for this attribute while configuring the user reconciliation scheduled task, which is described later in this guide.

To import the XML file for trusted source reconciliation:

1. Open the Oracle Identity Manager Administrative and User Console.
2. Click the **Deployment Management** link on the left navigation bar.
3. Click the **Import** link under Deployment Management. A dialog box for opening files is displayed.
4. Locate and open the `GroupwiseXMLResourceObject.xml` file, which is in the `OIM_HOME/xellerate/groupwise/xml` directory. Details of this XML file are shown on the File Preview page.
5. Click **Add File**. The Substitutions page is displayed.
6. Click **Next**. The Confirmation page is displayed.
7. Click **Import**.
8. In the message that is displayed, click **Import** to confirm that you want to import the XML file and then click **OK**.

After you import the XML file for trusted source reconciliation, you must set the value of the `TrustedSource` reconciliation scheduled task attribute to `True`. This procedure is described in the "[Configuring the Reconciliation Scheduled Tasks](#)" section on page 3-4.

### 3.1.4 Configuring the Reconciliation Scheduled Tasks

When you perform the procedure described in the "[Importing the Connector XML File](#)" section on page 2-9, the scheduled tasks for lookup fields and user reconciliations are automatically created in Oracle Identity Manager. To configure the scheduled task:

1. Open the Oracle Identity Manager Design Console.
2. Expand the **Xellerate Administration** folder.
3. Select **Task Scheduler**.
4. Click **Find**. The details of the predefined scheduled tasks are displayed on different tabs.
5. For the first scheduled task, enter a number in the **Max Retries** field. Oracle Identity Manager must attempt to complete the task before assigning the `FAILED` status to the task.
6. Ensure that the **Disabled** and **Stop Execution** check boxes are not selected.
7. In the Start region, double-click the **Start Time** field. From the date-time editor that is displayed, select the date and time at which you want the task to run.
8. In the Interval region, set the following schedule parameters:

- To set the task to run on a recurring basis, select the **Daily, Weekly, Recurring Intervals, Monthly, or Yearly** option.

If you select the **Recurring Intervals** option, then you must also specify the time interval at which you want the task to run on a recurring basis.

- To set the task to run only once, select the **Once** option.

9. Provide values for the attributes of the scheduled task. Refer to the "[Specifying Values for the Scheduled Task Attributes](#)" section on page 3-5 for information about the values to be specified.

**See Also:** *Oracle Identity Manager Design Console Guide* for information about adding and removing task attributes

10. Click **Save**. The scheduled task is created. The **INACTIVE** status is displayed in the **Status** field, because the task is not currently running. The task is run at the date and time that you set in Step 7.

11. Repeat Steps 5 through 10 to create the remaining scheduled tasks.

After you create the remaining scheduled tasks, proceed to the "[Configuring Provisioning](#)" section on page 3-8.

### 3.1.4.1 Specifying Values for the Scheduled Task Attributes

This section provides information about the values to be specified for the following scheduled tasks:

- [User Reconciliation Scheduled Task](#)
- [Distribution List Lookup Field Reconciliation Scheduled Task](#)
- [Post Office List Lookup Fields Reconciliation Scheduled Task](#)

**3.1.4.1.1 User Reconciliation Scheduled Task** You must specify values for the following attributes of the Groupwise User Recon Task user reconciliation scheduled task.

---



---

**Note:**

- Attribute values are predefined in the connector XML file that you import. Specify values only for those attributes that you want to change.
  - Values (either default or user-defined) must be assigned to all the attributes. If even a single attribute value were left empty, then reconciliation would not be performed.
- 
- 

Attribute	Description	Sample/Default Value
ITResourceName	Name of the IT resource for setting up a connection to Novell GroupWise	Groupwise IT Resource
eDirITResourceName	Name of the IT resource for setting up a connection to Novell eDirectory	eDirectory IT Resource
RemoteResourceName	Name of the IT resource in which the remote service name and URL are specified	GroupWise XRM
ResourceObjectName	Name of the resource object into which users must be reconciled	Groupwise User

Attribute	Description	Sample/Default Value
XLDeleteUsersAllowed	<p>If this attribute is set to <code>true</code>, then the Delete reconciliation event is started. Users who are deleted from the target system are removed from Oracle Identity Manager. This requires all the users on the target system to be compared with all the users in Oracle Identity Manager.</p> <p>If this attribute is set to <code>false</code>, then the users are not deleted.</p> <p><b>Note:</b> This process affects performance.</p>	<code>true/false</code>
TrustedSource	<p>Specifies whether or not reconciliation must be performed in trusted mode</p> <p>The value of this attribute must be set to <code>True</code> for trusted source reconciliation.</p> <p>The value of this attribute must be set to <code>False</code> for target source reconciliation.</p>	<code>True or False</code>
Xellerate Type	Default type for the Xellerate User account	End-User Administrator
Organization	Default organization for the Xellerate User	Xellerate Users
Role	Default employee type for the Xellerate User	Consultant
StartRecord	<p>The start record for the batching process</p> <p>This attribute is also discussed in the "<a href="#">Partial Reconciliation</a>" section on page 3-1.</p>	1
BatchSize	<p>The number of records that must be there in a batch</p> <p>This attribute is also discussed in the "<a href="#">Partial Reconciliation</a>" section on page 3-1.</p>	3
NumberOfBatches	<p>The number of batches that must be reconciled</p> <p>This attribute is also discussed in the "<a href="#">Partial Reconciliation</a>" section on page 3-1.</p>	<p>Default value: All Available</p> <p>Sample value: 50</p>

After you specify values for these task attributes, proceed to Step 10 of the procedure to create scheduled tasks.

**3.1.4.1.2 Distribution List Lookup Field Reconciliation Scheduled Task** You must specify values for the following attributes of the Groupwise DistributionList Lookup Recon Task Distribution List lookup fields reconciliation scheduled task.

---

**Note:**

- Attribute values are predefined in the connector XML file that you import. Specify values only for those attributes that you want to change.
  - Values (either default or user-defined) must be assigned to all the attributes. If even a single attribute value were left empty, then reconciliation would not be performed.
- 

Attribute	Description	Sample/Default Value
LookupCodeName	Name of the master distribution list lookup code table	Lookup.NGW.DistributionLists



Attribute	Description	Sample/Default Value
ITResourceName	Name of the IT resource for setting up a connection to Novell eDirectory	eDirectory IT Resource
SearchContext	Name of the Novell GroupWise context	O=mpaf_tree
ObjectClass	Name of the object class for the distribution list object	groupWiseDistributionList
ReconMode	Specify REFRESH to completely refresh the existing lookup.  Specify UPDATE to update the lookup with the new values.	Refresh

After you specify values for these task attributes, proceed to Step 10 of the procedure to create scheduled tasks.

**3.1.4.1.3 Post Office List Lookup Fields Reconciliation Scheduled Task** You must specify values for the following attributes of the Groupwise PostOffice List Lookup Recon Task Post Office List lookup field reconciliation scheduled task.

---

**Note:**

- Attribute values are predefined in the connector XML file that you import. Specify values only for those attributes that you want to change.
  - Values (either default or user-defined) must be assigned to all the attributes. If even a single attribute value were left empty, then reconciliation would not be performed.
- 

Attribute	Description	Sample/Default Value
LookupCodeName	Name of the master Post Office List lookup code table	Lookup.NGW.PostOffices
ITResourceName	Name of the IT resource for setting up a connection to Novell eDirectory	eDirectory IT Resource
SearchContext	Name of the Novell GroupWise context	O=mpaf_tree
ObjectClass	Name of the object class for the Post Office List object	groupWisePostOffice
ReconMode	Specify REFRESH to completely refresh the existing lookup.  Specify UPDATE to update the lookup with new values.	Refresh

After you specify values for these task attributes, proceed to Step 10 of the procedure to create scheduled tasks.

### Stopping Reconciliation

Suppose the User Reconciliation Scheduled Task for the connector is running and user records are being reconciled. If you want to stop the reconciliation process:

1. Perform Steps 1 through 4 of the procedure to configure reconciliation scheduled tasks.
2. Select the **Stop Execution** check box in the task scheduler.

3. Click **Save**.

## 3.2 Configuring Provisioning

As mentioned earlier in this guide, provisioning involves creating or modifying a user's account information on the target system through Oracle Identity Manager.

---

**Note:** You must perform the procedure described in this section if you want to use the provisioning features of Oracle Identity Manager for this target system.

---

Adapters are used to implement provisioning functions. The following adapters are imported into Oracle Identity Manager when you import the connector XML file:

**See Also:** The "[Supported Functionality](#)" section on page 1-3 for a listing of the provisioning functions that are available with this connector

- NGW Create Mailbox
- NGW Delete Mailbox
- NGW Disable Mailbox
- NGW Enable Mailbox
- NGW Move User to PostOffice
- NGW Add User to Distribution List
- NGW Remove User from Distribution List
- NGW Add Nickname to User
- NGW Reset Password
- NGW Change User Password
- NGW PP String
- NGW Delete Nickname of User

You must compile these adapters before they can be used in provisioning operations.

To compile adapters by using the Adapter Manager form:

1. Open the Adapter Manager form.
2. To compile all the adapters that you import into the current database, select **Compile All**.

To compile multiple (but not all) adapters, select the adapters you want to compile. Then, select **Compile Selected**.

---

**Note:** Click **Compile Previously Failed** to recompile only those adapters that were not compiled successfully. Such adapters do not have an OK compilation status.

---

3. Click **Start**. Oracle Identity Manager compiles the selected adapters.

4. If Oracle Identity Manager is installed in a clustered environment, then copy the compiled adapters from the `OIM_HOME/xellerate/Adapter` directory to the same directory on each of the other nodes of the cluster. If required, overwrite the adapter files on the other nodes.

If you want to compile one adapter at a time, then use the Adapter Factory form.

**See Also:** *Oracle Identity Manager Tools Reference Guide* for information about using the Adapter Factory and Adapter Manager forms

To view detailed information about an adapter:

1. Highlight the adapter in the Adapter Manager form.
2. Double-click the row header of the adapter, or right-click the adapter.
3. Select **Launch Adapter** from the shortcut menu that is displayed. Details of the adapter are displayed.



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## Testing and Troubleshooting

After you deploy the connector, you must test it to ensure that it functions as expected. This chapter discusses the following topics related to connector testing:

- [Running Test Cases](#)
- [Troubleshooting](#)

### 4.1 Running Test Cases

You can use the testing utility to identify the cause of problems associated with connecting to the target system and performing basic operations on the target system.

To use the testing utility:

1. Specify the required values in the `config.properties` file.

This file is in the `OIM_HOME/xellerate/groupwise/test/troubleshoot` directory. The following table describes the sections of this file in which you must provide information for running the tests.

Section	Information
Novell eDirectory Connection Parameters	Connection parameters required to connect to the Novell eDirectory system  Refer to the " <a href="#">Defining IT Resources</a> " section on page 2-10 for information about the values that you must provide.
Novell GroupWise Connection Parameters	Connection parameters required to connect to the Novell GroupWise system  Refer to the " <a href="#">Defining IT Resources</a> " section on page 2-10 for information about the values that you must provide.
Create Mailbox Parameters	Values required to create a mailbox
Modify Mailbox Parameters	Values required to modify a mailbox
Delete Mailbox Parameters	Values required to delete a mailbox

2. Use a text editor to open each of the BAT files in the `OIM_HOME/xellerate/groupwise/test/troubleshoot` directory. The names of the JAR files that must be added to the CLASSPATH environment variable are given in these BAT files. Copy these JAR files into the same directory as the BAT files and then add them to the CLASSPATH environment variable.
3. Run the appropriate BAT file to test the creation, modification, and deletion of users in Novell GroupWise:

- Create a user by running the `testcreate.bat` file.  
After you run the BAT file, check if the user is created in Novell GroupWise according to the details given in the `config.properties` file. If you run this BAT file from a command window, then the `User_Creation_Successful` message is displayed.
- Modify the user by running the `testmodify.bat` file.  
After you run the BAT file, check if the user is modified in Novell GroupWise according to the details given in the `config.properties` file. If you run this BAT file from a command window, then the `User_Modification_Successful` message is displayed.
- Delete the user by running the `testdelete.bat` file.  
After you run the BAT file, check if the user is deleted from Novell GroupWise. If you run this BAT file from a command window, then the `User_Deletion_Successful` message is displayed.

When you run testing utility, the `debugGW.log` file is created in the `OIM_HOME/xellerate/groupwise/test/troubleshoot` directory.

### 4.1.1 Testing Partial Reconciliation

To test query-based reconciliation, you can specify the following types of query conditions as values for the `CustomizedReconQuery` parameter:

- Queries with user attributes
  - Value assigned to the `CustomizedReconQuery` parameter:  
`cn=JOHN|cn=JANE`  
The user with user ID `JOHN` and `JANE` are reconciled.
  - Value assigned to the `CustomizedReconQuery` parameter:  
`nGWFileID=f06|nGWFileID=s1z`  
The users with File ID `f06` and `s1z` are reconciled.
  - Value assigned to the `CustomizedReconQuery` parameter:  
`nGWFileID=f06&nGWAccountID=s1z`  
The users with File ID `f06` and Account ID `s1z` are reconciled.
  - Value assigned to the `CustomizedReconQuery` parameter:  
`nGWGatewayAccess=jk112`  
The users with the Gateway Access value `jk112` are reconciled.

### 4.1.2 Testing Batch-Based Reconciliation

You can test reconciliation based on batching and data paging of user records by specifying values for the following user reconciliation scheduled task attributes:

- If you set the value of `StartRecord` to 1, `BatchSize` to 0, and `NumberOfBatches` to `All Available`, then all the users are reconciled.
- If you set the value of `StartRecord` to 1, `BatchSize` to 5, and `NumberOfBatches` to 50, then all the users starting from record 1 are reconciled in 50 batches, with 5 records in each batch.

- If you set the value of `StartRecord` to 200, `BatchSize` to 5, and `NumberOfBatches` to 50, then all the users starting from record 200 are reconciled in 50 batches, with 5 records in each batch.

The results of batching are displayed in the logger file, which is located in the following path:

`JBOSS_HOME/server/default/log/server.log`

In this file, you can view the batch numbers, the user ids of the users that are reconciled, and whether the reconciliation is successful or not.

## 4.2 Troubleshooting

This section provides solutions to the following commonly encountered errors associated with the connector:

- [Remote Method Invocation Errors](#)
- [Novell GroupWise Connector Errors](#)

### 4.2.1 Remote Method Invocation Errors

The following are steps to resolve remote method invocation errors:

- Verify that the URL has been correctly specified in the `GroupWise XRM IT` resource definition.
- In the remote manager form, ensure that the **Running** check box is selected for the `GroupWise XRM IT` resource. If it is not selected, then the remote manager may not be running.

### 4.2.2 Novell GroupWise Connector Errors

Errors discussed in this section are divided on the basis of response codes:

- [Common Response Codes for All Use Cases](#)
- [Use Case-Specific Response Codes](#)

#### Common Response Codes for All Use Cases

The errors discussed in the following table correspond to common response codes for all use cases.

Problem Description	Solution
Oracle Identity Manager cannot establish a connection with Novell eDirectory.	<ul style="list-style-type: none"> <li>■ Ensure that the Novell eDirectory server is running.</li> <li>■ Ensure that Oracle Identity Manager is running.</li> </ul>
<b>Returned Error Message:</b>	<ul style="list-style-type: none"> <li>■ Ensure that all the adapters have been compiled.</li> </ul>
Unable to communicate with the eDirectory server	<ul style="list-style-type: none"> <li>■ Use the IT Resources form to examine the Oracle Identity Manager record. Ensure that the IP address, admin ID, and admin password are correct.</li> </ul>
<b>Returned Error Code:</b>	
<code>GW_EDIR_COMMUNICATION_ERROR</code>	<ul style="list-style-type: none"> <li>■ Check if the <code>SSL IT</code> resource parameter is set to <code>false</code>. It must be set to <code>true</code> if the Novell eDirectory server is accepting only SSL connections.</li> <li>■ Check if the specified eDirectory connection values (in the Novell eDirectory IT resource) are correct.</li> </ul>

Problem Description	Solution
<p>Target not available.</p> <p><b>Returned Error Message:</b> eDirectory server may not be available</p> <p><b>Returned Error Code:</b> GW_EDIR_TARGET_UNAVAILABLE_ERROR</p>	<ul style="list-style-type: none"> <li>Check if Novell eDirectory is running.</li> <li>Check if the Novell eDirectory connection values specified in the eDirectory IT resource definition are correct.</li> <li>Check if the server IP address in the Novell eDirectory/GroupWise connection information is correct.</li> </ul>
<p>Authentication error</p> <p><b>Returned Error Message:</b> Unable to authenticate to the eDirectory server</p> <p><b>Returned Error Code:</b> GW_EDIR_AUTHENTICATION_ERROR</p>	<ul style="list-style-type: none"> <li>Check if the Novell eDirectory connection values, especially the admin credentials, specified in the IT resource definition are correct.</li> <li>Check if the SSL IT resource parameter is set to <code>false</code>. It must be set to <code>true</code> if SSL has been enabled on the Novell eDirectory server.</li> </ul>
<p>Naming error</p> <p><b>Returned Error Message:</b> Naming exception encountered while trying to connect to the eDirectory server</p> <p><b>Returned Error Code:</b> GW_EDIR_INVALID_NAMING_ERROR</p>	<p>Check if the Novell eDirectory connection values specified in the IT resource definition are correct.</p>
<p>Oracle Identity Manager cannot establish a connection to Novell Directory Services (NDS).</p> <p><b>Returned Error Message:</b> NDS connection failed</p> <p><b>Returned Error Code:</b> GW_NDS_CONNECTION_FAILED</p>	<ul style="list-style-type: none"> <li>Ensure that Novell eDirectory is running.</li> <li>Ensure that Oracle Identity Manager is running.</li> <li>Ensure that all the adapters have been compiled.</li> <li>Use the IT Resources form to examine the Oracle Identity Manager record. Ensure that the IP address, admin ID, and admin password are correct.</li> <li>Check if the Novell GroupWise connection values specified in the IT resource definition are correct.</li> <li>Check if some other user is connected to the NDS server through Novell Client. If yes, then close that connection.</li> </ul>
<p>Oracle Identity Manager cannot establish a connection to Novell Directory Services (NDS).</p> <p><b>Returned Error Message:</b> Invalid credentials</p> <p><b>Returned Error Code:</b> GW_NDS_INVALID_CREDENTIALS</p>	<ul style="list-style-type: none"> <li>Check if the Novell GroupWise connection values, especially the admin credentials, specified in the IT resource definition are correct.</li> <li>Check if some other user is connected to the NDS server through Novell Client. If yes, then close that connection.</li> </ul>
<p>Oracle Identity Manager cannot establish a connection to Novell GroupWise.</p> <p><b>Returned Error Message:</b> Could not create instance of GroupWise class</p> <p><b>Returned Error Code:</b> GW_FAILED_TO_CREATE_INSTANCE</p>	<ul style="list-style-type: none"> <li>Check if Novell Client has been installed on the computer on which the remote manager is installed.</li> <li>Check if the Novell GroupWise client has been installed on the computer on which the remote manager is installed.</li> </ul>



Problem Description	Solution
<p>Oracle Identity Manager cannot establish a connection to Novell Directory Services (NDS) or Novell GroupWise.</p> <p><b>Returned Error Message:</b></p> <p>Invalid eDirectory Tree</p> <p><b>Returned Error Code:</b></p> <p>GW_INVALID_TREE</p>	<p>Check if the Novell GroupWise connection values, especially the eDirectory tree, specified in the IT resource definition are correct.</p>
<p>Oracle Identity Manager cannot establish a connection to Novell GroupWise.</p> <p><b>Returned Error Message:</b></p> <p>Invalid domain DN or path</p> <p><b>Returned Error Code:</b></p> <p>GW_INVALID_DOMAIN_DN_OR_PATH</p>	<ul style="list-style-type: none"> <li>Check if the Novell GroupWise connection values specified in the IT resource definition, especially the GroupWise domain DN or path, are correct.</li> <li>Check if the connection values have been specified in the format given in this document.</li> <li>Check if the Novell GroupWise domain database is corrupted.</li> </ul>
<p>JNI out of memory</p> <p><b>Returned Error Message:</b></p> <p>JNI out of memory error encountered</p> <p><b>Returned Error Code:</b></p> <p>GW_JNI_OUT_OF_MEMORY_ERROR</p>	<p>JNI has run out of memory. Increase JVM memory on the server on which the remote manager is installed.</p>
<p>Internal error has occurred</p> <p><b>Returned Error Message:</b></p> <p>Internal error encountered in Groupwise</p> <p><b>Returned Error Code:</b></p> <p>GW_INTERNAL_ERROR</p>	<p>Review the log file to determine the exact error.</p>
<p>Invalid argument</p> <p><b>Returned Error Message:</b></p> <p>Invalid arguments passed to method</p> <p><b>Returned Error Code:</b></p> <p>GW_INVALID_ARGUMENTS</p>	<p>Check if the Novell GroupWise connection values specified in the IT resource definition are correct.</p>

Problem Description	Solution
<p>Required information missing</p> <p><b>Returned Error Message:</b></p> <p>Empty or null arguments were passed for mandatory fields or for connection information</p> <p><b>Returned Error Code:</b></p> <p>GW_INSUFFICIENT_INFO_PROVIDED</p>	<ul style="list-style-type: none"> <li>■ Ensure that the IP address, admin ID, and admin password are correct.</li> <li>■ Ensure that the following connection information has been provided IT resource definition:</li> </ul> <p><b>Information about the Novell eDirectory connection:</b></p> <ul style="list-style-type: none"> <li>- Novell eDirectory server name</li> <li>- Novell eDirectory port number</li> <li>- Novell eDirectory root context</li> <li>- Admin user DN</li> <li>- Admin user password</li> <li>- Whether or not SSL is to be used</li> </ul> <p><b>Information about the Novell GroupWise connection:</b></p> <ul style="list-style-type: none"> <li>- Novell eDirectory tree</li> <li>- Novell eDirectory context</li> <li>- Novell admin user DN</li> <li>- Novell admin password</li> <li>- Novell GroupWise domain DN or path</li> </ul> <p>The required information also includes other process data, such as the user ID.</p>
<p>User not present</p> <p><b>Returned Error Message:</b></p> <p>User does not exist</p> <p><b>Returned Error Code:</b></p> <p>GW_USER_DOES_NOT_EXIST</p>	<p>The specified user ID does not exist in Novell eDirectory.</p>
<p>Mailbox not present</p> <p><b>Returned Error Message:</b></p> <p>Mailbox does not exist</p> <p><b>Returned Error Code:</b></p> <p>GW_MAILBOX_DOES_NOT_EXIST</p>	<p>The specified mailbox does not exist in Novell GroupWise.</p>
<p>Mailbox already present</p> <p><b>Returned Error Message:</b></p> <p>Mailbox already exists for the specified user</p> <p><b>Returned Error Code:</b></p> <p>GW_MAILBOX_ALREADY_EXISTS</p>	<p>The specified mailbox already exists in Novell GroupWise.</p>
<p>Post office not present</p> <p><b>Returned Error Message:</b></p> <p>PostOffice does not exist</p> <p><b>Returned Error Code:</b></p> <p>GW_POSTOFFICE_DOES_NOT_EXIST</p>	<p>The specified post office does not exist in Novell GroupWise.</p>

Problem Description	Solution
Distribution list not present <b>Returned Error Message:</b> Distribution list does not exist <b>Returned Error Code:</b> GW_DISTLIST_DOES_NOT_EXIST	The specified distribution list does not exist in Novell GroupWise.
Nickname not present <b>Returned Error Message:</b> Nickname does not exist <b>Returned Error Code:</b> GW_NICKNAME_DOES_NOT_EXIST	The specified nickname does not exist in Novell GroupWise.

### Use Case-Specific Response Codes

The errors discussed in the following table correspond to response codes that are specific to use cases. For all the errors listed in the table, you must review the log file to determine the exact error.

Problem Description	Solutions
Oracle Identity Manager cannot create a user or mailbox in Novell GroupWise. <b>Returned Error Message:</b> Could not create mailbox <b>Returned Error Code:</b> GW_MAILBOX_CREATE_FAILED	Review the log file to determine the exact error.
Oracle Identity Manager cannot delete a user or mailbox in Novell GroupWise. <b>Returned Error Message:</b> Could not delete mailbox <b>Returned Error Code:</b> GW_MAILBOX_DELETE_FAILED	Review the log file to determine the exact error.
Oracle Identity Manager cannot disable a user or mailbox in Novell GroupWise. <b>Returned Error Message:</b> Mailbox could not be disabled <b>Returned Error Code:</b> GW_MAILBOX_DISABLE_FAILED	Review the log file to determine the exact error.
Oracle Identity Manager cannot add a nickname to the user. <b>Returned Error Message:</b> Nickname add failed <b>Returned Error Code:</b> GW_NICKNAME_ADD_FAILED	A nickname already exists for the specified user. Review the log file to determine the exact error.

Problem Description	Solutions
<p>Oracle Identity Manager cannot remove the nickname of a user.</p> <p><b>Returned Error Message:</b></p> <p>Nickname remove failed</p> <p><b>Returned Error Code:</b></p> <p>GW_NICKNAME_REMOVE_FAILED</p>	<p>Review the log file to determine the exact error.</p>
<p>Oracle Identity Manager cannot add a user to a distribution list.</p> <p><b>Returned Error Message:</b></p> <p>Could not add user to distribution list</p> <p><b>Returned Error Code:</b></p> <p>GW_DISTLIST_USERADD_FAILED</p>	<p>Review the log file to determine the exact error.</p>
<p>Oracle Identity Manager cannot remove a user from a distribution list.</p> <p><b>Returned Error Message:</b></p> <p>Could not remove user from distribution list</p> <p><b>Returned Error Code:</b></p> <p>GW_DISTLIST_USERREMOVE_FAILED</p>	<p>Review the log file to determine the exact error.</p>
<p>Oracle Identity Manager cannot reset the password of a user.</p> <p><b>Returned Error Message:</b></p> <p>Password reset failed</p> <p><b>Returned Error Code:</b></p> <p>GW_PASSWORD_RESET_FAILED</p>	<p>Review the log file to determine the exact error.</p>
<p>Oracle Identity Manager cannot move a user to the specified post office.</p> <p><b>Returned Error Message:</b></p> <p>Could not move mailbox</p> <p><b>Returned Error Code:</b></p> <p>GW_POSTOFFICE_MOVEUSER_FAILED</p>	<p>Review the log file to determine the exact error.</p>
<p>Oracle Identity Manager cannot modify an attribute of a user.</p> <p><b>Returned Error Message:</b></p> <p>Could not modify mailbox</p> <p><b>Returned Error Code:</b></p> <p>GW_USER_ATTRIBUTE_SET_FAILED</p>	<p>The specified attribute name may be invalid. Review the log file to determine the exact error.</p>

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## Known Issues

The following are known issues associated with this release of the connector:

- **Bug 7656117**

The following issue is observed if you are using version 6.5 of Novell GroupWise as the target system:

While performing the Add User To Distribution List provisioning operation, Remote Manager stops functioning if the length of the distinguished name of the distribution list is more than 97 characters.

If the length of the Distribution List DN process form field is more than 64 characters, then you cannot create the distribution list.

To overcome this issue, use version 7.0 of Novell GroupWise with SP3 as the target system.

- **Bug 8547806**

During the Add User To Distribution List provisioning operation, the Add User to Distribution List task is completed successfully. If you perform the Add User To Distribution List provisioning operation again for the same target system user, then the status of the Add User To Distribution List task is rejected. However, the child form displays the name of the distribution list twice.

Now, if you perform the Remove User From Distribution List provisioning operation, then the target system user is successfully removed from the distribution list. However, the child form still displays the name of the distribution list. If you perform the Remove User From Distribution List provisioning operation again, then (although the user was successfully removed from the distribution list) the Remove User from Distribution List task is completed successfully.

This issue is because of a GroupWise API. The same issue has been mentioned in the administrative Web site of Novell:

[http://developer.novell.com/wiki/index.php/GroupWise\\_Administrative\\_Object\\_API\\_Defect\\_Fixes](http://developer.novell.com/wiki/index.php/GroupWise_Administrative_Object_API_Defect_Fixes)

- **Bug 8575556**

If the distribution list or nickname list is empty, then reconciliation is performed with the [None] string value as the Distribution List and Nick Name List values in Oracle Identity Manager.

The following is a limitation of the target system:

Versions 6.5 and 7 of Novell GroupWise do not support the entry of non-ASCII characters. Therefore, you cannot transfer non-ASCII data through the connector.

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However, error messages and response codes would be displayed in Oracle Identity Manager in the language corresponding to the language that you select.

## Attribute Mappings Between Oracle Identity Manager and Novell GroupWise

The following table discusses attribute mappings between Oracle Identity Manager and Novell GroupWise.

Oracle Identity Manager Attribute	Novell GroupWise Attribute	Description
User ID	cn	User's login ID
Visibility	nGWVisibility	Visibility of user in GroupWise system
File ID	nGWFileID	GroupWise user's unique FileID
Post Office	nGWPostOffice	Post Office for addressing Messages
Exp Date	nGWMailboxExpirationTime	GroupWise Mailbox expiration time
Account ID	nGWAccountID	User's GateWay account ID
Gateway Access	nGWGatewayAccess	Restricts access to a GroupWise gateway
ldapObjectClass	objectclass	Named group of attributes
ldapUserObjectClass	inetOrgPerson	Objectclass to create a user
ldapUserDNPrefix	cn	common name
ldapTargetResourceTimeStampField	modifyTimestamp	Modified time stamp of the user
ldapMultiValAttr	Distribution List, Dist List, Participant, Nick Names, Nick Name, NNVisibility	Multivalue Attributes
Dist List	distlist	Public address list
Participant	participant	Participation type (To, Cc, or Bcc)
Nick Name	nickname	Alternative address
NNVisibility	visibility	Determines the post office to which the object's information is distributed





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# Index

## A

---

- Adapter Manager form, 3-8
- adapters, compiling, 3-8
- additional files, 2-1, 2-8, 2-9
- Administrative and User Console, 2-9, 3-4
- attributes
  - Distribution List lookup fields reconciliation scheduled task, 3-6
  - Post Office lookup fields reconciliation scheduled task, 3-7
  - user reconciliation scheduled task, 3-5
- attributes mappings, A-1

## C

---

- changing input locale, 2-14
- clearing server cache, 2-14
- compiling adapters, 3-8
- configuring
  - date format, 2-14
  - Oracle Identity Manager server, 2-14
  - SSL, 2-17
- configuring connector, 3-1
- configuring provisioning, 3-8
- connector files and directories
  - copying, 2-8
  - description, 1-5
  - destination directories, 2-8
  - installation directory, 1-5, 2-8
- connector installer, 2-2
- connector testing, 4-1
- connector version number, determining, 1-6
- connector XML files
  - See* XML files
- connector, configuring, 3-1
- creating scheduled tasks, 3-4

## D

---

- date format, configuring, 2-14
- defining
  - IT resources, 2-10
  - scheduled tasks, 3-4
- deployment requirements, 2-1
- Design Console, 2-14, 3-4

- determining version number of connector, 1-6
- Distribution List lookup fields reconciliation scheduled task, 3-6

## E

---

- enabling logging, 2-15
- errors
  - Novell GroupWise connector, 4-3
  - remote method invocation, 4-3
- external code files, 2-1, 2-8, 2-9

## F

---

- files
  - additional, 2-1, 2-8, 2-9
  - external code, 2-1, 2-8, 2-9
  - See also* XML files
- files and directories of the connector
  - See* connector files and directories
- functionality supported, 1-3
- functions available, 1-3

## G

---

- globalization features, 1-4
- GroupWise domain DN, 2-7, 2-13
- GroupWise domain path, 2-7, 2-13

## I

---

- importing connector XML files, 2-9
- infrastructure requirements, 2-1
- input locale, changing, 2-14
- installing connector, 2-2
- issues, 5-1
- IT resources
  - defining, 2-10
  - eDirectory IT Resource, 2-5, 2-10, 2-17, 3-7
  - Groupwise IT Resource, 2-6, 2-10, 2-11
  - GroupWise XRM, 2-4, 2-9, 2-10
  - parameters, 2-10
  - types, Remote Manager, 2-10

## **L**

---

limitations, 5-1  
logging enabling, 2-15  
lookup fields reconciliation, 1-2  
lookup fields reconciliation scheduled tasks, 3-6, 3-7

## **M**

---

mapping between attributes of target system and  
Oracle Identity Manager, A-1  
multilanguage support, 1-4

## **N**

---

Novell GroupWise  
connector errors, 4-3  
domain DN, 2-7, 2-13  
domain path, 2-7, 2-13

## **O**

---

Oracle Identity Manager Administrative and User  
Console, 2-9, 3-4  
Oracle Identity Manager Design Console, 2-14, 3-4  
Oracle Identity Manager server, configuring, 2-14

## **P**

---

parameters of IT resources, 2-10  
Post Office lookup fields reconciliation scheduled  
task, 3-7  
problems, 4-3  
process tasks, 1-3  
provisioning  
fields, 1-3  
functions, 1-3  
module, 1-3

## **R**

---

reconciliation  
functions, 1-3  
lookup fields, 1-2  
module, 1-1  
user, 1-2  
remote method invocation errors, 4-3  
requirements for deploying, 2-1

## **S**

---

scheduled tasks  
attributes, 3-5  
defining, 3-4  
Distribution List lookup fields reconciliation, 3-6  
Post Office lookup fields reconciliation, 3-7  
user reconciliation, 3-5  
server cache, clearing, 2-14  
SSL, configuring, 2-17  
supported  
functionality, 1-3

languages, 1-4  
releases of Oracle Identity Manager, 2-1  
target systems, 2-1

## **T**

---

target systems  
supported, 2-1  
test cases, 4-1  
testing the connector, 4-1  
testing utility, 4-1  
troubleshooting, 4-3

## **U**

---

user attribute mappings, A-1  
user reconciliation, 1-2  
user reconciliation scheduled task, 3-5

## **V**

---

version number of connector, determining, 1-6

## **X**

---

XML files  
copying, 2-8  
description, 1-5  
importing, 2-9