

**Oracle® Identity Manager**

Connector Framework Guide

Release 9.0.1

**B31142-01**

June 2006

Oracle Identity Manager Connector Framework Guide, Release 9.0.1

B31142-01

Copyright © 2006, Oracle. All rights reserved.

Primary Authors: Don Gosselin, Lyju Vadassery

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software--Restricted Rights (June 1987). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Oracle, JD Edwards, PeopleSoft, and Siebel are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

---

---

# Contents

<b>Preface</b> .....	v
Audience .....	v
Documentation Accessibility .....	v
Related Documents .....	vi
Documentation Updates .....	vii
Conventions .....	vii
<b>1 Introduction to Oracle Identity Manager</b>	
<b>Architecture of Oracle Identity Manager</b> .....	1-1
Presentation Layer .....	1-2
Dynamic Presentation Logic Layer .....	1-2
Business Logic Layer .....	1-3
Application Server .....	1-3
Client Interfaces and Business Logic Implementation .....	1-3
Data Access Layer .....	1-3
Backend System Integration Layer .....	1-4
Database .....	1-4
Remote Manager .....	1-4
<b>Deployment Configurations of Oracle Identity Manager</b> .....	1-4
Provisioning .....	1-4
Reconciliation.....	1-5
One-Time Reconciliation.....	1-6
Target Resource Reconciliation.....	1-6
Trusted Source Reconciliation .....	1-7
Provisioning and Reconciliation .....	1-7
<b>Features of Oracle Identity Manager</b> .....	1-8
<b>2 What Is an Oracle Identity Manager Connector?</b>	
Components Common to All Connectors .....	2-1
<b>3 Deploying Connectors</b>	
Overview of Connector Deployment .....	3-1
General Considerations .....	3-1

## Index



---

---

# Preface

*Oracle Identity Manager Connector Framework Guide* provides information about integrating Oracle Identity Manager with various third-party applications.

---

---

**Note:** This is a transitional release following Oracle's acquisition of Thor Technologies. Some parts of the product and documentation still refer to the original Thor company name and Xellerate product name and will be rebranded in future releases.

---

---

## Audience

This guide is intended for users who want to deploy the Oracle Identity Manager connector for any supported third-party application.

## Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at

<http://www.oracle.com/accessibility/>

### Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

### Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

## TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, seven days a week. For TTY support, call 800.446.2398.

## Related Documents

For more information, refer to the following documents in the Oracle Identity Manager documentation set:

- *Oracle Identity Manager Release Notes*
- *Oracle Identity Manager Installation and Upgrade Guide for JBoss*
- *Oracle Identity Manager Installation and Upgrade Guide for WebLogic*
- *Oracle Identity Manager Installation and Upgrade Guide for WebSphere*
- *Oracle Identity Manager Administrative and User Console Guide*
- *Oracle Identity Manager Administrative and User Console Customization Guide*
- *Oracle Identity Manager Design Console Guide*
- *Oracle Identity Manager Tools Reference Guide*
- *Oracle Identity Manager Audit Report Developer Guide*
- *Oracle Identity Manager Best Practices Guide*
- *Oracle Identity Manager Connector Guide for BMC Remedy User Management*
- *Oracle Identity Manager Connector Guide for CA ACF2 Advanced*
- *Oracle Identity Manager Connector Guide for CA Top Secret Advanced*
- *Oracle Identity Manager Connector Guide for Database Access*
- *Oracle Identity Manager Connector Guide for Database Tables*
- *Oracle Identity Manager Connector Guide for IBM RACF*
- *Oracle Identity Manager Connector Guide for IBM RACF Advanced*
- *Oracle Identity Manager Connector Guide for IBM Lotus Notes and Domino*
- *Oracle Identity Manager Connector Guide for Microsoft Active Directory*
- *Oracle Identity Manager Password Synchronization Module for Microsoft Active Directory Installation and Configuration Guide*
- *Oracle Identity Manager Connector Guide for Microsoft Exchange 2000 and 2003*
- *Oracle Identity Manager Connector Guide for Microsoft Exchange 5.5*
- *Oracle Identity Manager Connector Guide for Microsoft Windows 2000*
- *Oracle Identity Manager Connector Guide for Microsoft Windows NT*
- *Oracle Identity Manager Connector Guide for Novell eDirectory*
- *Oracle Identity Manager Connector Guide for Novell GroupWise*
- *Oracle Identity Manager Connector Guide for Oracle eBusiness Employee Reconciliation*
- *Oracle Identity Manager Connector Guide for Oracle eBusiness User Management*
- *Oracle Identity Manager Connector Guide for Oracle Internet Directory*
- *Oracle Identity Manager Connector Guide for PeopleSoft Employee Reconciliation*

- *Oracle Identity Manager Connector Guide for PeopleSoft User Management*
- *Oracle Identity Manager Connector Guide for Siebel*
- *Oracle Identity Manager Connector Guide for RSA Authentication Manager*
- *Oracle Identity Manager Connector Guide for RSA ClearTrust*
- *Oracle Identity Manager Connector Guide for SAP CUA*
- *Oracle Identity Manager Connector Guide for SAP Employee Reconciliation*
- *Oracle Identity Manager Connector Guide for SAP Enterprise Portal*
- *Oracle Identity Manager Connector Guide for SAP User Management*
- *Oracle Identity Manager Connector Guide for Sun Java System Directory*
- *Oracle Identity Manager Connector Guide for UNIX SSH*
- *Oracle Identity Manager Connector Guide for UNIX Telnet*

## Documentation Updates

Oracle is committed to delivering the best and most recent information available. For information about updates to the Oracle Identity Manager 9.0.1 connector documentation set, visit Oracle Technology Network at

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

## Conventions

The following text conventions are used in this document:

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



---

---

# Introduction to Oracle Identity Manager

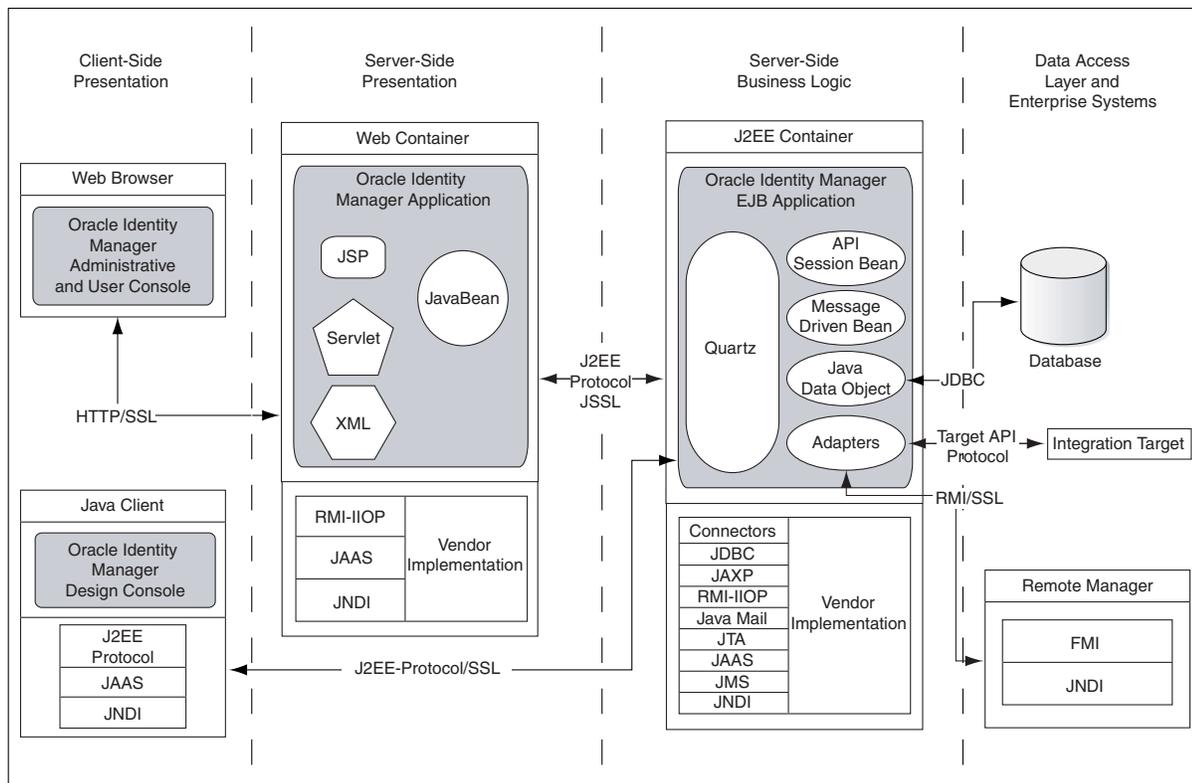
Oracle Identity Manager automates access rights management, security, and provisioning of IT resources. This chapter provides an overview of Oracle Identity Manager.

This chapter is divided into the following sections:

- [Architecture of Oracle Identity Manager](#)
- [Deployment Configurations of Oracle Identity Manager](#)
- [Features of Oracle Identity Manager](#)

## Architecture of Oracle Identity Manager

Oracle Identity Manager is based on the n-tier J2EE application architecture. [Figure 1-1](#) illustrates the architecture of Oracle Identity Manager.

**Figure 1–1 Architecture of Oracle Identity Manager**

This section discusses the following tiers of the Oracle Identity Manager architecture:

- [Presentation Layer](#)
- [Dynamic Presentation Logic Layer](#)
- [Business Logic Layer](#)
- [Data Access Layer](#)
- [Backend System Integration Layer](#)

## Presentation Layer

The Presentation layer consists of two clients: the Oracle Identity Manager Administrative and User Console and the Oracle Identity Manager Design Console. The Administrative and User Console is a Web-based thin client that can be accessed from any Web browser. This console provides user self-service and delegated administration features that serve most of the provisioning requirements.

The Design Console provides the full range of the Oracle Identity Manager system configuration and development capabilities including Form Designer, Workflow Designer, and the Adapter Factory. You can access the Design Console by using a desktop Java client.

## Dynamic Presentation Logic Layer

Because both the Administrative and User Console and the Design Console are highly dynamic, the Dynamic Presentation Logic layer guides the content displayed on these interfaces. In the case of the Administrative and User Console, there is a clear

separation between the Presentation and Presentation Logic Layer. No such boundary exists in the Design Console.

## Business Logic Layer

The Business Logic layer is implemented as an EJB application. Oracle Identity Manager runs on leading J2EE-compliant application server platforms, leveraging the J2EE services provided by these application servers to deliver a high-performance, fault-tolerant enterprise application.

The following are components of the Business Logic layer:

- [Application Server](#)
- [Client Interfaces and Business Logic Implementation](#)

### Application Server

The application server on which Oracle Identity Manager runs provides life-cycle management, security, deployment, and run-time services to the logical components that make up Oracle Identity Manager. These services include:

- Scalable management of resources (clustering and failover)
- Transaction management
- Security management
- Client access
- Technology resources (such as database connection pooling and messaging)

### Client Interfaces and Business Logic Implementation

The core functionality of the Oracle Identity Manager platform is implemented in Java using a highly modular, object-oriented methodology. This includes the various engines that comprise the Oracle Identity Manager platform: Workflow Engine, Request Engine, User Management Engine, Rule Engine, and Reconciliation Engine. It also includes the integration layer based on the Adapter Factory, which dynamically generates integration code based on the metadata definition of the adapters.

Access to the functionality of the platform is through a set of EJB Beans. These session beans can be divided into two types:

- **Nonpublished APIs:** These are session beans that expose functionality used only by the Design Console.
- **Published Public APIs:** These are session beans that expose the public functionality of Oracle Identity Manager.

The API layer provides access to high-level functionality in Oracle Identity Manager. It is the basis for the functionality implemented in the Oracle Identity Manager Administrative and User Console. It is also the interface that custom clients can use to access Oracle Identity Manager functionality.

## Data Access Layer

J2EE contains several technologies for manipulating and interacting with transactional resources (such as databases) that are based on JDBC, JTA, and JTS. The Oracle Identity Manager architecture leverages the following J2EE services:

- Database connection pooling

- Integration with JNDI (lookup of DataSources in the JNDI namespace)
- XA compliance
- Batch updates

The system administrator can manage data sources in the same manner in which all standard J2EE applications in the enterprise are managed. Oracle Identity Manager can use these data sources to communicate with the database tier.

## Backend System Integration Layer

The Backend System Integration layer can be divided into the following:

- [Database](#)
- [Remote Manager](#)

### Database

The Database tier consists of the Oracle Identity Manager repository, which manages and stores Oracle Identity Manager metadata in an ANSI SQL 92-compliant relational database. All the data resides in the Oracle Identity Manager repository.

### Remote Manager

The Remote Manager is an Oracle Identity Manager server component that runs on a target system computer. It provides the network and security layer required to integrate with applications that do not have network-aware APIs or do not provide security. It is built as a lightweight RMI server. The communication protocol is RMI tunneled over HTTP/S.

The J2EE RMI framework enables the creation of virtually transparent, distributed services and applications. RMI-based applications consist of Java objects making method calls to one another, regardless of their location. This enables one Java object to call methods on another Java object residing on another virtual computer in the same manner in which methods are called on a Java object residing on the same virtual computer.

## Deployment Configurations of Oracle Identity Manager

This section discusses the following deployment configurations of Oracle Identity Manager:

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

## Provisioning

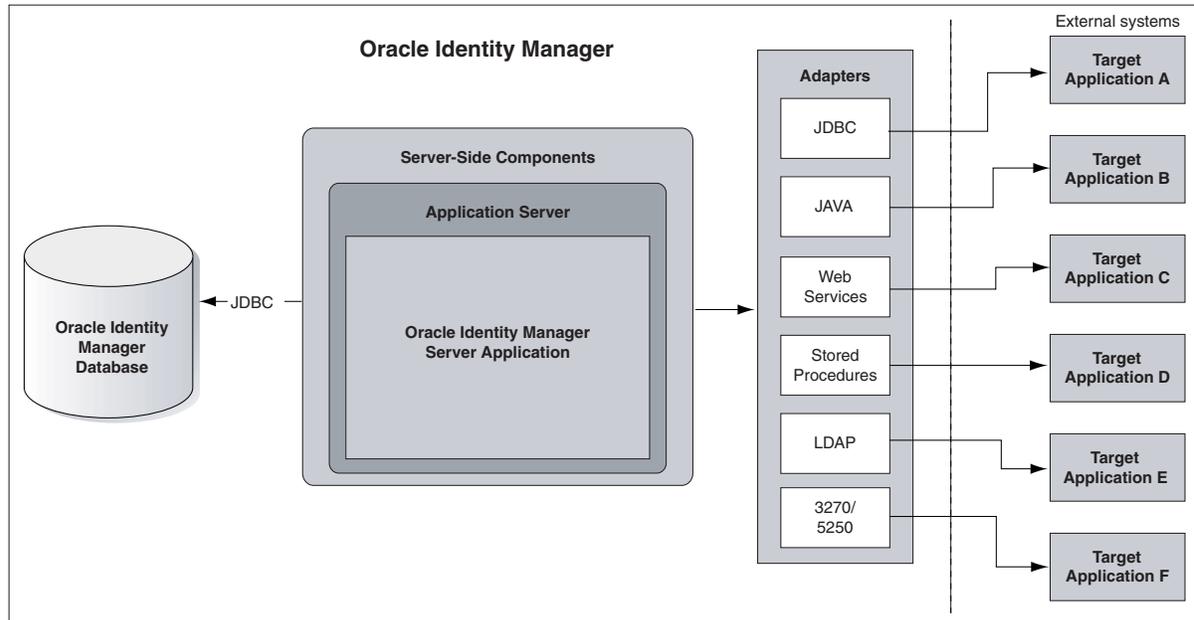
You can use Oracle Identity Manager to create, maintain, and delete accounts on target systems. Oracle Identity Manager becomes the front-end entry point for managing all the accounts on these systems. After the accounts are provisioned, the users for whom accounts have been provisioned are able to access the target systems without any interaction with Oracle Identity Manager. This is the **provisioning** configuration of Oracle Identity Manager.

The purpose of provisioning is to automate the creation and maintenance of user accounts on target systems. Provisioning is also used to accommodate any

requirement for workflow approvals and auditing that may be a component of that provisioning lifecycle.

Figure 1–2 illustrates the provisioning configuration.

**Figure 1–2 Provisioning Configuration of Oracle Identity Manager**



Provisioning events are initiated either through requests or by direct provisioning.

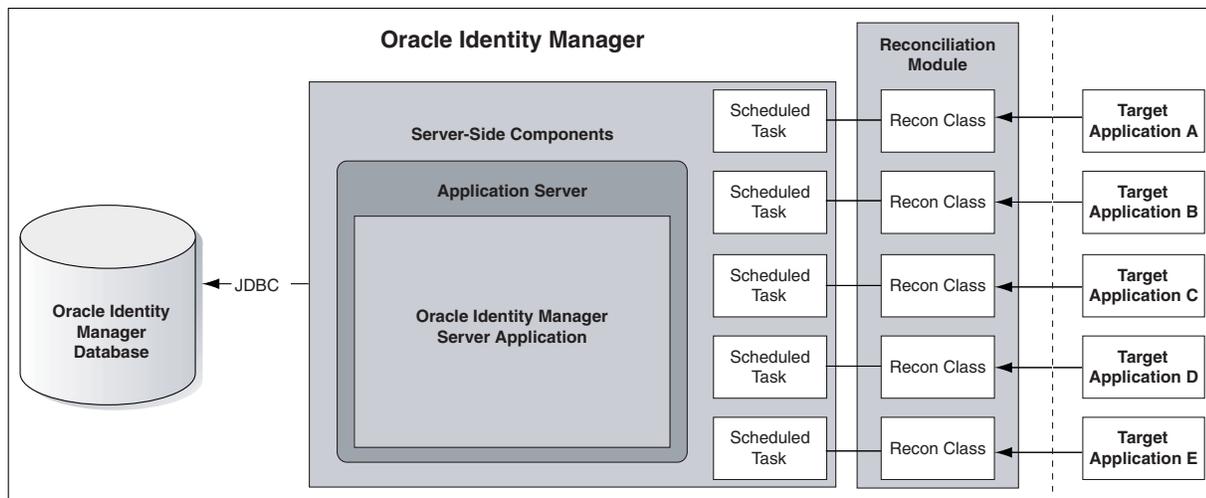
A request can be manually created by an administrator or, in certain cases, by target users themselves. Oracle Identity Manager automatically creates requests for some events. For example, a request is automatically created when Oracle Identity Manager enforces the requirements of an access policy. You can also use Oracle Identity Manager to create approval processes that can be run as part of the request-based provisioning cycle.

Direct provisioning is a special administrator-only function that lets you create an account for a particular user on a target application without having to wait for any workflow or approval processes.

## Reconciliation

Oracle Identity Manager provides a centralized control mechanism to manage user accounts and entitlements and to control user access to resources. However, you may choose not to use Oracle Identity Manager as the primary repository or front-end entry point of your user accounts. Instead, you may decide to use Oracle Identity Manager to periodically poll your system applications in order to maintain an accurate profile of all accounts that exist on those systems. This is the **reconciliation** configuration of Oracle Identity Manager.

Figure 1–3 illustrates the reconciliation configuration.

**Figure 1–3 Reconciliation Configuration of Oracle Identity Manager**

In this configuration, Oracle Identity Manager is used only as an archive for all account management actions that are performed on the target system. It is assumed that user accounts are created, deleted, and maintained by the local resource-specific administrators.

Reconciliation involves using the user discovery and account discovery features of Oracle Identity Manager.

**User discovery** is the process of recognizing the existence of a user account on a primary database. The primary database is the repository that is considered to contain the master list of user accounts. Within the context of user discovery and reconciliation, the primary database is also referred to as the **trusted source** or **authoritative source**. There may be more than one trusted source for each Oracle Identity Manager environment.

**Account discovery** is the process of recognizing changes to user-related information on resources. If the information that is changed affects the user's primary record, it is generally a change associated with a trusted source. If the information that is changed is related to a user's access to a resource, it is generally a change associated with a target resource.

The following are different forms of reconciliation:

- [One-Time Reconciliation](#)
- [Target Resource Reconciliation](#)
- [Trusted Source Reconciliation](#)

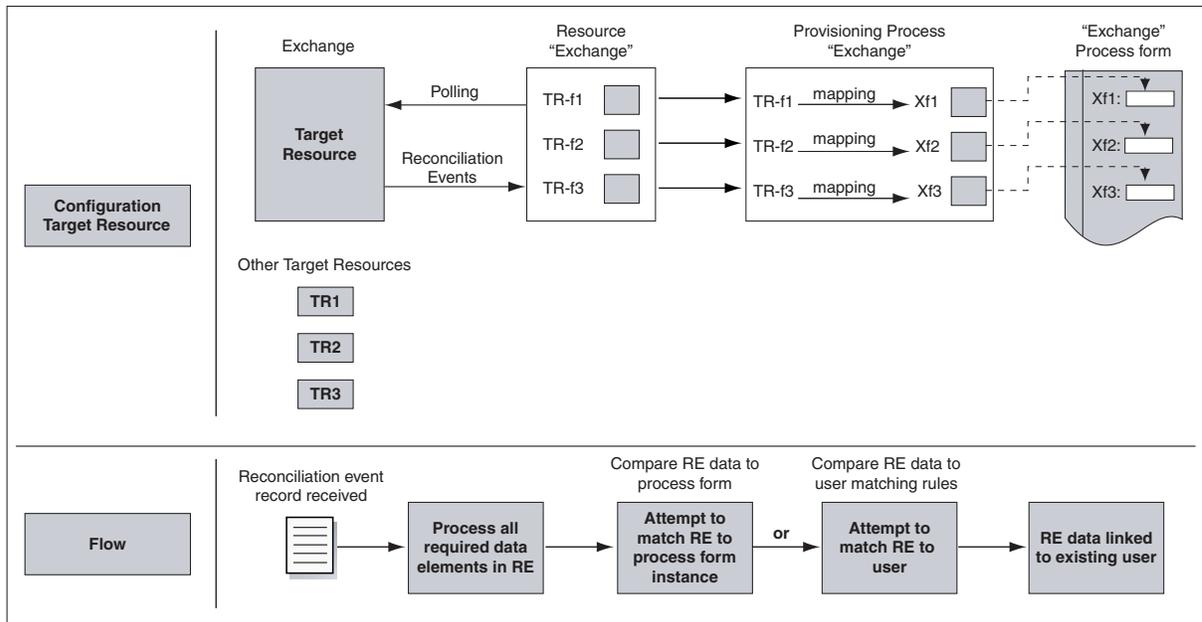
### One-Time Reconciliation

You can use Oracle Identity Manager to perform a single, one-time reconciliation with a legacy target system. The purpose of this form of reconciliation is to import all accounts on that system into Oracle Identity Manager. After one-time reconciliation is performed, you can use Oracle Identity Manager to provision accounts for your users.

### Target Resource Reconciliation

[Figure 1–4](#) illustrates the steps involved in target resource reconciliation.

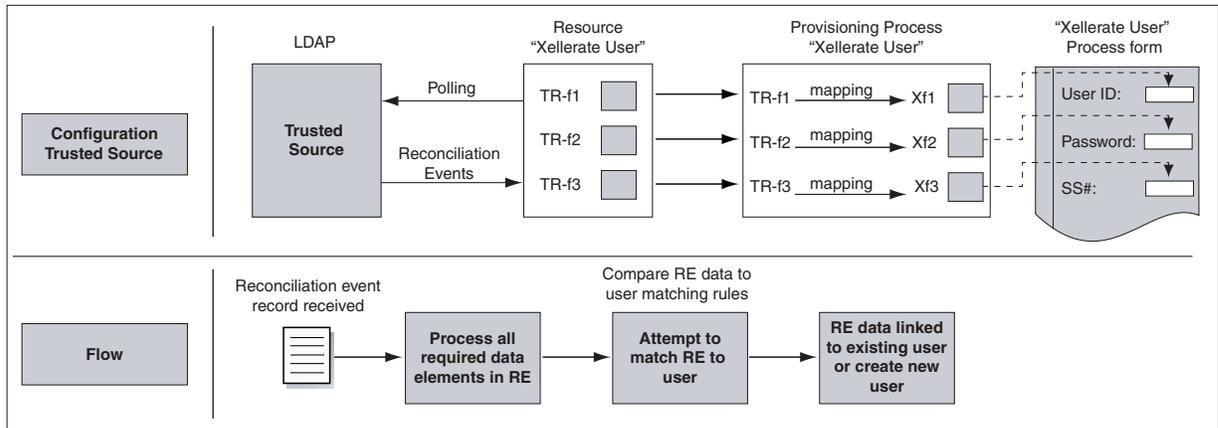
**Figure 1–4 Target Resource Reconciliation**



### Trusted Source Reconciliation

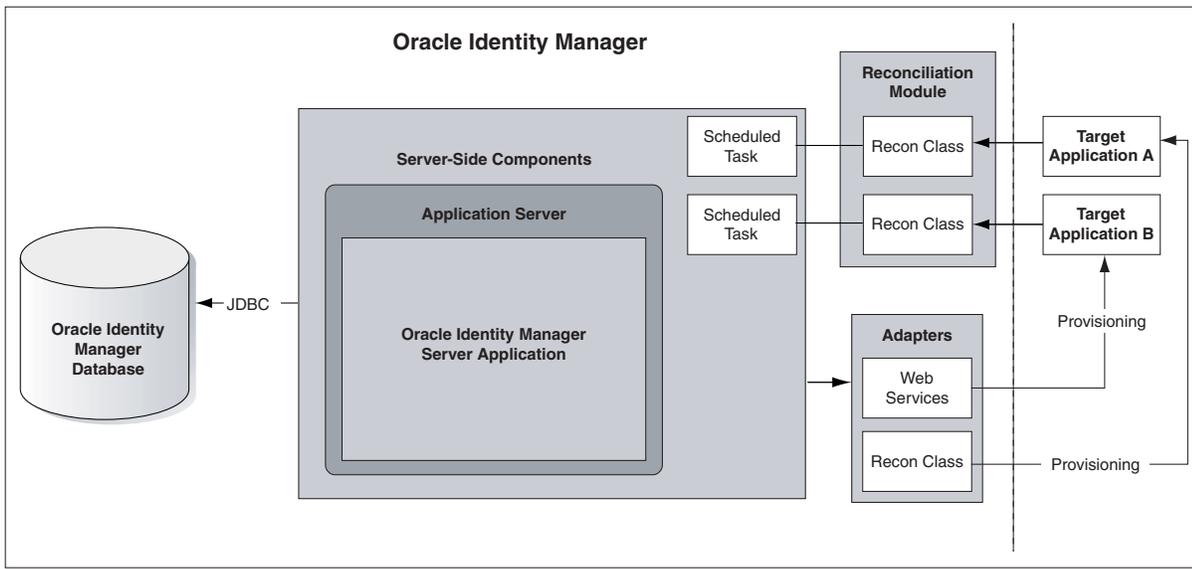
Figure 1–5 illustrates the steps involved in trusted source reconciliation.

**Figure 1–5 Trusted Source Reconciliation**



### Provisioning and Reconciliation

Figure 1–6 illustrates the **provisioning and reconciliation** configuration in which you use Oracle Identity Manager to perform both provisioning and reconciliation activities. In this configuration, it is assumed that you allow accounts on target systems to be created and maintained by both local administrators and Oracle Identity Manager.

**Figure 1–6 Provisioning and Reconciliation Configuration of Oracle Identity Manager**

To achieve this configuration, you must perform all the steps associated with setting up both provisioning and reconciliation.

## Features of Oracle Identity Manager

The following are the features of Oracle Identity Manager:

- **Scalable architecture**

Oracle Identity Manager is based on open, standards-based technology. The J2EE application server model of Oracle Identity Manager offers scalability, failover, load-balancing, and built-in Web deployment features.

- **Comprehensive user management**

Oracle Identity Manager can support unlimited user organizational hierarchies and user groups with inheritance, customizable user ID policy management, password policy management, and user access policies. It also offers the feature of delegated administration with comprehensive permission settings. You can use Oracle Identity Manager to maintain a resource allocation history and to manage application parameters and entitlements.

- **Web-based user self-service**

Oracle Identity Manager contains a user self-service portal that is customizable and Web based. This portal can be used to manage user information, change and synchronize passwords, reset passwords, request access to applications, review and edit entitlements, and work on workflow tasks.

- **Flexible process engine**

Using Oracle Identity Manager, you can create business and provisioning process models in applications like Microsoft Project and Microsoft Visio. Process models include support for approval workflows and escalations. You can track the progress of each provisioning event in the workflow.

Oracle Identity Manager provides support for complex branching, self-healing processes, and nested processes with data interchange and dependencies. The process flow can be customized without making code changes.

- **Comprehensive reporting for audit-trail accounting**

Oracle Identity Manager provides status reports on all processes with full-state information, in real time. In addition, it even offers OLAP features.

- **Automated tool for connector management**

Oracle Identity Manager provides an automated tool for connector generation. This tool, which is known as the **Adapter Factory**, supports a wide range of interfaces, applications, and devices. The adapters generated by the Adapter Factory run on the Oracle Identity Manager server, and they do not require any agents to be installed or updated on the target systems. The use of the Adapter Factory helps speed up the process of connector development and simplifies the task of updating existing connectors.

If the target system does not have a network-enabled interface, you can use the Oracle Identity Manager Remote Manager to provide an SSL-secured network communication channel and interface to local APIs that are not running on the Oracle Identity Manager server. By using the Remote Manager, you can run functions on target systems having APIs that are not network aware.

- **Built-in change management**

Oracle Identity Manager enables you to package new processes, import and export existing processes, and move packages from one system to another.



---

---

## What Is an Oracle Identity Manager Connector?

An Oracle Identity Manager connector is used to integrate Oracle Identity Manager with a specific third-party application, such as Microsoft Exchange or Novell eDirectory. Oracle Identity Manager is packaged with a number of predefined connectors.

---

---

**Note:** Oracle Identity Manager connectors were referred to as *resource adapters* prior to the acquisition of Thor Technologies by Oracle.

---

---

### Components Common to All Connectors

In general, an XML file for a connector contains records for the connector components listed in the following table.

Component	Description
Resource Object	This is a virtual representation of the target application on which you want to provision accounts. It is the parent record with which the provisioning process and process form are associated.
Provisioning Process	This process definition is used to create, maintain, and delete accounts on the target system. It consists of definitions of the individual tasks that are used to perform automated functions on the target system. Each connector is packaged with a single provisioning process. You can manually create additional provisioning processes that you require.

Component	Description
Process Form	<p>This form is used to provide information about user accounts to be created, updated, or deleted on the target system. This form is also used to capture data that can be used by provisioning process tasks or to provide a mechanism for users to provide real-time data.</p> <p>This form is also extensively used when conducting reconciliation. The table structure associated with this form supports the archiving and auditing of user accounts on the target system.</p> <p>Each process form consists of field definitions required by a standard connector. If you require additional fields, you can create another version of the form and add the required fields.</p> <p>Each connector is shipped with certain default process forms. You can manually create additional process forms that you require.</p>
IT Resource Type	<p>This component is a template for all IT resource definitions associated with the connector. An IT resource type specifies the parameters that are common to all IT resource instances, such as host servers and computers, of that particular IT resource type.</p> <p>The parameters specified in this definition are inherited by all IT resource definitions of that type. For example, the Solaris 8 IT resource type may have a parameter called IP Address. The value of that parameter for the Target_Solaris IT resource instance may be set to 192.168.50.25.</p>
Adapters	<p>This includes all adapters that are required to perform common functions on the target application. Each adapter is predefined with certain mappings and functional behavior. These adapters are capable of interacting with the tasks in the provisioning process and the fields of the process form.</p>
Scheduled Task (where applicable)	<p>If the connector that you want to use is shipped with a predefined reconciliation module, then you are provided with a scheduled task definition. You use this component to control the frequency at which the target system is polled for changes to tracked data.</p>

### Provisioning Process Tasks

The Provisioning Process component contains the predefined tasks (or their equivalents) listed in the following table.

Provisioning Process Task	Purpose
Create User	Create a new user account on the target application (provision the user with an account).
Disable User	Temporarily disable a user account on the target application.
Enable User	Reenable a disabled user account on the target application.
Delete User	Delete a user account on the target application (revoke the user's account).
Update User	Modify the privileges or profile of a user account on the target application.

Some of these tasks are also preconfigured with the process task adapter that automates their function on the target system. Before you complete the deployment of a connector, you must examine the default behavior and variable mappings of these adapters to ensure that they interact with your target system as required.

### Reconciliation-Related Provisioning Process Tasks

In addition to the tasks listed in the earlier section, the Provisioning Process component also contains the reconciliation-related tasks listed in the following table.

---



---

**Note:** When Oracle Identity Manager receives a reconciliation event, all provisioning-related tasks within the provisioning process are suppressed and the relevant reconciliation-related task is inserted.

---



---

Provisioning Process Task (Reconciliation-Related)	Purpose
Reconciliation Insert Received	<p>This task is inserted into the Provisioning Process instance associated with the user when Oracle Identity Manager determines that the reconciliation event received from the target system represents the creation of a user account.</p> <p>In addition, the information in the reconciliation event record is stored in the process form according to the mappings set on the provisioning process.</p>
Reconciliation Update Received	<p>This task is inserted into the Provisioning Process instance associated with the user when Oracle Identity Manager determines that the reconciliation event received from the target system represents the update of an existing user account.</p> <p>In addition, the information in the reconciliation event record is stored in the process form according to the mappings set on the provisioning process.</p>
Reconciliation Delete Received	<p>This task is inserted into the Provisioning Process instance associated with the user when Oracle Identity Manager determines that the reconciliation event received from the target system represents the deletion of an existing user account.</p>

A sample template is shipped with some connectors. You can use this sample template when defining the Java class that is used to:

- Poll your target system.
- Extract the relevant data for the records that satisfy the reconciliation criteria.
- Create reconciliation events in Oracle Identity Manager corresponding to the data that is extracted.



---

---

## Deploying Connectors

This chapter provides generic information about the procedure to deploy a connector. For detailed information about the procedure to deploy a target-specific connector, refer to the deployment guide for that connector. The "[Related Documents](#)" section of the preface contains a list of all the deployment guides.

---

---

**Note:** It is recommended that you customize and test connectors before you move them to your production environment.

---

---

This chapter discusses the following sections:

- [Overview of Connector Deployment](#)
- [General Considerations](#)

### Overview of Connector Deployment

The following are the high-level steps involved in deploying a connector:

1. Import the relevant XML file into the Oracle Identity Manager environment. There may be more than one XML file associated with the connector for your target application.

When you import the connector XML file, create at least one IT resource definition. This definition is used by Oracle Identity Manager to connect to the actual computer on which the target application is hosted. This definition is required for the provisioning process and the associated adapters to run successfully.

2. Determine whether you want to deploy Oracle Identity Manager as a provisioning, reconciliation, or provisioning and reconciliation solution. The procedure to follow depends on the type of solution you select.

**See Also:** "[Deployment Configurations of Oracle Identity Manager](#)" on page 1-4 for information about the various configurations in which Oracle Identity Manager can be deployed

3. Compile the adapters that are predefined with the connector XML file.

### General Considerations

The following are general considerations that you must address:

- Some connectors require external libraries in the form of JAR files for normal functioning. You may need to purchase these JAR files from the respective vendors.

After you obtain these JAR files, you must configure Oracle Identity Manager as required. For example, you may need to update the `classpath` file.

- Some connectors require external software to be installed on the target system. For example, if you are using the Bourne (`sh`) shell on Solaris, then you must install and start WbemServices on the target Solaris computer. Otherwise, you cannot use Oracle Identity Manager to provision users on Solaris.
- To make most prepackaged connectors function as required, you must configure the target systems separately. Where required, this step is explained in the connector deployment guides.

---

---

# Index

## A

---

architecture of Oracle Identity Manager, 1-1

## C

---

components connector, 2-1

configurations

    provisioning, 1-4

    provisioning and reconciliation, 1-7

    reconciliation, 1-5

connector components, 2-1

## D

---

design, 1-1

## F

---

features of Oracle Identity Manager, 1-8

## L

---

layers

    Backend System Integration, 1-4

    Business Logic, 1-3

    Data Access, 1-3

    Dynamic Presentation Logic, 1-2

    Presentation, 1-2

## O

---

Oracle Identity Manager features of, 1-8

## P

---

provisioning, 1-4

provisioning and reconciliation configuration, 1-7

## R

---

reconciliation, 1-5

reconciliation, one-time, 1-6

reconciliation, target resource, 1-6

## T

---

tiers, 1-2, 1-3, 1-4

