

# Oracle® Identity Manager

## Connector Guide for Dropbox



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# Preface

This guide describes the connector that is used to integrate Oracle Identity Manager with Dropbox.

## Audience

This guide is intended for resource administrators and target system integration teams.

## Documentation Accessibility

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## Related Documents

For information about installing and using Oracle Identity Manager, visit the following Oracle Help Center page:

[http://docs.oracle.com/cd/E52734\\_01/index.html](http://docs.oracle.com/cd/E52734_01/index.html)

For information about the Oracle Identity Manager Connector for Microsoft Active Directory User Management, visit the following Oracle Help Center page:

[https://docs.oracle.com/cd/E22999\\_01/doc.111/e20347/toc.htm](https://docs.oracle.com/cd/E22999_01/doc.111/e20347/toc.htm)

For information about Oracle Identity Manager Connectors documentation, visit the following Oracle Help Center page:

[http://docs.oracle.com/cd/E22999\\_01/index.htm](http://docs.oracle.com/cd/E22999_01/index.htm)

## Conventions

The following text conventions are used in this document:

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.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

# What's New in Oracle Identity Manager Connector for Dropbox?

These are the updates made to the software and documentation for the Oracle Identity Manager Connector for Dropbox in release 11.1.1.5.0.

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

- [Software Updates](#)

This section provides information on the updates that are made to the connector software. This section also provides information on the sections of this guide that are changed in response to each software update.

- [Documentation-Specific Updates](#)

This section provides information on the major changes that are made to this guide. For example, the relocation of a section from the second chapter to the third chapter is a documentation-specific update. These changes are not related to software updates.

## Software Updates

These are the updates made to the connector software.

### **Software Updates in Release 11.1.1.5.0**

This is the first release of the Oracle Identity Manager Connector for Dropbox. Therefore, there are no software updates in this release.

## Documentation-Specific Updates

These are the updates made to the connector documentation.

### **Documentation-Specific Updates in Release 11.1.1.5.0**

The following documentation-specific update has been made in revision "3" of this guide:

- The "Oracle Identity Governance or Oracle Identity Manager" row of [Table 1-1](#) has been updated to include support for Oracle Identity Governance release 12c PS4 (12.2.1.4.0).

The following documentation-specific updates have been made in revision "2" of this guide:

- The "Connector Server" row has been added to [Table 1-1](#).
- Chapter 3 "Known Issues and Workarounds for the Dropbox Connector" chapter has been removed as there are no known issues in this release of the connector.

# 1

## About the Dropbox Connector

The Oracle Identity Manager Connector for Dropbox (Dropbox connector) integrates Oracle Identity Manager with the Dropbox target system.

The following topics provide a high-level overview of the Dropbox connector:

- [Introduction to the Dropbox Connector](#)
- [Certified Components for the Dropbox Connector](#)
- [Architecture of the Dropbox Connector](#)
- [Operations Supported by the Dropbox Connector](#)
- [Use Cases Supported by the Dropbox Connector](#)

### 1.1 Introduction to the Dropbox Connector

Oracle Identity Manager is a centralized identity management solution that provides self service, compliance, provisioning and password management services for applications residing on-premise or on the Cloud. Oracle Identity Manager connectors are used to integrate Oracle Identity Manager with the external and identity-aware applications. The Dropbox connector enables Oracle Identity Manager to manage Dropbox by using Microsoft Active Directory (AD) as a middleware.

Microsoft Active Directory is configured as a user source for performing all of the user management operations (create, update, delete, disable, and enable users) in Dropbox, and the user management data is directly stored in AD.

 **Note:**

The Oracle Identity Manager Connector for Dropbox is referred to as **Dropbox connector** in this guide. Similarly, the Oracle Identity Manager Connector for Microsoft Active Directory User Management is referred to as **OIM AD connector**, and the Dropbox Business Active Directory Connector is referred to as **Dropbox AD connector**.

The Dropbox connector uses the following connectors to synchronize data between Oracle Identity Manager and Dropbox:

#### **Oracle Identity Manager Connector for Microsoft Active Directory User Management**

The Oracle Identity Manager Connector for Microsoft Active Directory User Management (OIM AD connector) allows synchronization of the Dropbox user and group information between Oracle Identity Manager and AD. It uses AD as a managed (target) resource of the identity data. The OIM AD connector is configured to run in the account management mode (or target resource management). This mode enables the following operations:

- **Provisioning**

Provisioning involves creating, updating, or deleting users on AD through Oracle Identity Manager. When you allocate (or provision) a Microsoft Active Directory resource to an Oracle Identity Manager User, the operation results in the creation of an account on Microsoft Active Directory for that user. In the Oracle Identity Manager context, the term "provisioning" is also used to mean updates (for example enabling or disabling) made to the AD account through Oracle Identity Manager.

- **Target resource reconciliation**

In target resource reconciliation, data related to newly created and modified accounts on AD can be reconciled and linked with existing Oracle Identity Manager Users and provisioned resources. To perform target resource reconciliation, the Active Directory User Target Recon scheduled job is used.

Depending on the data that you want to reconcile, you use different scheduled jobs.

To understand the OIM AD connector in detail, including certified languages, supported features, and lookup definitions used during connector operations, see *About the Connector* in *Oracle Identity Manager Connector Guide for Microsoft Active Directory User Management*.

### **Dropbox Business Active Directory Connector**

Dropbox uses a lightweight Dropbox Business Active Directory Connector (Dropbox AD connector) behind the firewall to synchronize the Dropbox user and group information between AD and Dropbox directory services.

The Dropbox AD connector automates provisioning of User and Group accounts in Dropbox from AD. These User and Group accounts are included as members of a Microsoft Active Directory group (specified as values of the AD Sync Group attribute of AD), which is used for synchronizing the accounts from AD to Dropbox through the Dropbox AD Connector scheduled task.

For more information on the Dropbox AD connector, visit the Dropbox website at <https://www.dropbox.com/>, navigate to Help Center, and search for Dropbox Active Directory Connector.

## 1.2 Certified Components for the Dropbox Connector

These are the software components and their versions required for installing and using the connector.

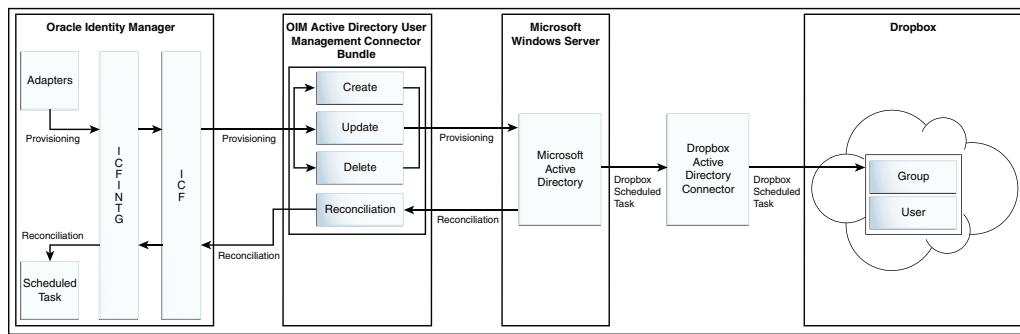
**Table 1-1 Certified Components**

Component	Requirement
Oracle Identity Governance or Oracle Identity Manager	You can use one of the following releases of Oracle Identity Governance or Oracle Identity Manager: <ul style="list-style-type: none"><li>• Oracle Identity Governance 12c (12.2.1.4.0)</li><li>• Oracle Identity Governance 12c (12.2.1.3.0)</li><li>• Oracle Identity Manager 11g Release 2 PS2 BP09 (11.1.2.2.9)</li><li>• Oracle Identity Manager 11g Release 2 PS3 BP06 (11.1.2.3.6)</li></ul>
Target system	Dropbox <b>Note:</b> Oracle Identity Manager manages Dropbox by using Microsoft Active Directory (AD) as a middleware. Therefore, AD is configured as a user source for performing all of the user management operations in Dropbox.
Connector Server	11.1.2.1.0
Oracle Identity Manager Connector for Microsoft Active Directory User Management	11.1.1.6.0
Dropbox Business Active Directory Connector	2.0.850300

## 1.3 Architecture of the Dropbox Connector

The user management operations are implemented in Dropbox by using Microsoft Active Directory (AD) as a middleware.

As discussed earlier, the Dropbox connector uses the OIM AD connector and Dropbox AD connector to synchronize the Dropbox user and group information between Oracle Identity Manager, AD, and Dropbox directory services.

**Figure 1-1** Architecture of the Dropbox Connector

As shown in [Figure 1-1](#), AD is configured as a target resource of Oracle Identity Manager. The OIM AD connector is a .NET framework-based connector that is implemented using the Integrated Common Framework (ICF) component. The ICF component provides basic reconciliation and provisioning operations that are common to all Oracle Identity Manager connectors. In addition, ICF provides common features that developers would otherwise need to implement on their own, such as connection pooling, buffering, time outs, and filtering. ICF is distributed together with Oracle Identity Manager. Therefore, you do not need to configure or modify ICF.

The Dropbox connector helps in provisioning User and Group accounts in Dropbox through the following two-step process:

1. The OIM AD connector creates or updates User and Group accounts in AD through the provisioning operations that are performed on Oracle Identity Manager.
2. The Dropbox AD connector automates provisioning of the User and Group accounts in Dropbox by fetching the attributes from AD and then synchronizing the data with Dropbox through the Dropbox AD Connector scheduled task. Based on the data fetched from AD, the User and Group accounts are automatically created or updated in Dropbox.

Through reconciliation, account data that is created and updated directly on AD is fetched into Oracle Identity Manager and stored against the corresponding Oracle Identity Manager Users.

For more information on the architecture of the OIM AD connector, see Connector Architecture in *Oracle Identity Manager Connector Guide for Microsoft Active Directory User Management*.

For more information on the Dropbox AD connector, visit the Dropbox website at <https://www.dropbox.com/>, navigate to Help Center, and search for Dropbox Active Directory Connector.

## 1.4 Operations Supported by the Dropbox Connector

These are the user management operations supported by the Dropbox connector.

- Create User
- Update User
- Delete User

- Enable User
- Disable User
- Create Group
- Update Group
- Assign Group to User

## 1.5 Use Cases Supported by the Dropbox Connector

Dropbox is a cloud-based application that offers file-hosting services, such as cloud storage, file synchronization, personal cloud, and client software. The Dropbox connector enables Oracle Identity Manager to manage identities and access privileges for Dropbox users and groups.

The following are some of the most common scenarios in which the Dropbox connector can be used:

### **Dropbox User Management**

The Dropbox connector automates provisioning and deprovisioning of Dropbox User accounts. Because Dropbox involves accessing and sharing content with users or groups across various locations, this connector ensures a secure access by granting it to users with appropriate access rights. For example, after a user joins an organization, a Dropbox user account is automatically provisioned to the user based on the predefined access policies in Oracle Identity Manager. Similarly, this account is deactivated after the user leaves the organization.

### **Dropbox Group Management**

The Dropbox connector automates provisioning and deprovisioning of Dropbox Group accounts. You can configure a parent group by adding multiple users or groups (these groups may further include a set of users) in a flat group hierarchy. This configured group is then synchronized with Dropbox, and the associated user and group details are created.

This connector also helps in managing access rights for Dropbox Group accounts by ensuring specific access to various teams or departments in an organization.

# 2

## Deploying and Using the Dropbox Connector

As a prerequisite for Oracle Identity Manager to communicate with Microsoft Active Directory and Dropbox, the OIM AD connector and Dropbox AD connector must be deployed and configured at the back end.

This chapter contains the following sections:

- [Deploying and Using the OIM AD Connector](#)
- [Deploying and Using the Dropbox AD Connector](#)

### 2.1 Deploying and Using the OIM AD Connector

Deploying the connector involves performing the preinstallation, installation, and postinstallation tasks. You can use the connector for performing reconciliation and provisioning operations after configuring it to meet your requirements.

The detailed instructions for deploying and using the OIM AD connector are available in the following sections of *Oracle Identity Manager Connector Guide for Microsoft Active Directory User Management*:

- Deploying the Connector for performing the preinstallation, installation, and postinstallation tasks
- Using the Connector for understanding the guidelines on using the connector, performing the connector operations, and uninstalling the connector
- Extending the Functionality of the Connector for extending the functionality of the connector to address your specific requirements

### 2.2 Deploying and Using the Dropbox AD Connector

Deploying the connector involves performing the preinstallation, installation, and postinstallation tasks. After configuring the connector, you can use it to synchronize the Dropbox user and group information between Microsoft Active Directory and Dropbox directory services.

The procedure to deploy and use the Dropbox AD connector is available in the Dropbox product documentation.

For the detailed instructions on deploying and using the Dropbox AD connector, visit the Dropbox website at <https://www.dropbox.com/>, navigate to Help Center, and search for Dropbox Active Directory Connector.

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