

Oracle® Construction and Engineering Using the Oracle Aconex Cloud Adapter with Oracle Integration 3



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Preface

This guide describes how to configure this adapter as a connection in an integration in Oracle Integration.

**Note:**

The use of this adapter may differ depending on the features you have, or whether your instance was provisioned using Standard or Enterprise edition. These differences are noted throughout this guide.

Topics:

- [Audience](#)
- [Documentation Accessibility](#)
- [Diversity and Inclusion](#)
- [Related Resources](#)
- [Conventions](#)

Audience

This guide is intended for developers who want to use this adapter in integrations in Oracle Integration.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <https://www.oracle.com/corporate/accessibility/>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <https://support.oracle.com/portal/> or visit [Oracle Accessibility Learning and Support](#) if you are hearing impaired.

Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and

the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

Related Resources

See these Oracle resources:

- Oracle Cloud at <http://cloud.oracle.com>
- [Using Integrations in Oracle Integration 3](#)
- [Using the Oracle Mapper with Oracle Integration 3](#)
- [Oracle Aconex Documentation](#)

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	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.

1

Understand the Oracle Aconex Cloud Adapter

Review the following topics to learn about the Oracle Aconex Cloud Adapter and how to use it as a connection in integrations in Oracle Integration. A typical workflow of adapter and integration tasks is also provided.

Topics:

- [Oracle Aconex Cloud Adapter Capabilities](#)
- [Oracle Aconex Cloud Adapter Restrictions](#)
- [Oracle Aconex Cloud Adapter Use Cases](#)
- [What Application Version Is Supported?](#)
- [Workflow to Create and Add a Connection to an Integration](#)

Oracle Aconex Cloud Adapter Capabilities

The Oracle Aconex Cloud Adapter enables you to set up a connection with Oracle Aconex. It is one of many predefined adapters included with Oracle Integration. You can configure the Oracle Aconex Cloud Adapter as an invoke connection within an integration in Oracle Integration.

Adapter Capabilities

- **Easy API Module Selection:** Facilitates the seamless selection of various Oracle Aconex API modules, including:
 - Directory
 - Documents
 - Mail
 - Project Fields
 - Projects Tasks
 - User Roles
 - Workflows
- **Simple Operation Selection:** Allows effortless selection of specific operations (API service endpoints) within each selected API module. Each operation is accompanied by a basic description for usage clarification.
- **Intuitive Data Mapping Functionality:** Supports intuitive data mapping based on the selected operation, with mandatory fields highlighted as necessary.
- **Automatic Population of Request Parameters:** Automatically populates common request parameters essential for a successful API request, streamlining the integration process.

Adapter Benefits

- **Accelerated Integration Timeline:** Significantly reduces the time required to create integrations with Oracle Aconex through Oracle Integration.
- **Simplified Integration Process:** Enables seamless integration of Oracle Aconex with other applications, even without extensive knowledge of Oracle Integration or Oracle Aconex REST APIs. While familiarity with REST APIs can enhance certain functionalities, it is not mandatory for basic integration tasks.
- **No Dependency on the Generic REST Adapter:** Eliminates the need to rely on the generic REST Adapter, providing a tailored solution for Oracle Aconex integration needs.

Oracle Aconex Cloud Adapter Restrictions

The Oracle Aconex Cloud Adapter has the following restrictions:

- **Basic Authentication Support:** Only supports Basic Authentication (Basic Auth). Advanced authentication mechanisms (such as OAuth) are not supported yet.

Note:

There are overall service limits for Oracle Integration. A service limit is the quota or allowance set on a resource. See Service Limits.

Resolved Restrictions

- The restriction for synchronizing only one file at a time when working with files has been removed. The adapter now supports multiple file uploads for all multi-part/mixed operations (including file uploads, edits, etc.) within the Documents and Mails modules. Users need to duplicate the Attachment object in the mapper to enable multiple file uploads.
- The restriction for supporting only "Small File Upload" has been removed. The "Large File Upload" functionality has been implemented.
 - The adapter now automatically determines the appropriate upload method based on the file size:
 - * For files less than 100 MB, the standard "Small File Upload" method is used.
 - * For files between 100 MB and 1 GB, the "Large File Upload" method is used.
 - The adapter also automatically updates the headers and path for the "Large File Upload" method, implementing an automated chunking approach.

Additional Improvements and Corrections

- **Documents**
 - The support for the "View Document Type Schema" operation in the Documents module has been restored. The accept header issue has been fixed, and the operation now functions correctly.
 - The issue with the "Download Mail Attachment" endpoint has been resolved. The error `<ErrorCode>URL_UNKNOWN</ErrorCode>` has been fixed, and the operation is now working properly.

- The issue with the "Get Saved Searches" endpoint in the Documents module has been resolved. The error response with error code 404 and `<ErrorCode>URL_UNKNOWN</ErrorCode>` has been fixed, and the operation is now working properly.
- **Mails**
 - The "List Mail" API endpoint has been added to the Mails module. This service executes a search of an organization's project mailbox, enabling users to retrieve a list of mails efficiently.
 - The issue with the "Mark Mail As Read" and "Mark Mail As Unread" operations has been resolved. The bug that caused an error to display on the Summary page and prevented the creation of the invoice has been fixed.
 - The error with the "Forward Mail" and "Reply Mail" operations has been resolved. The issue that caused the system to return an "unknown value: {mailId}" error has been fixed, and the `INVALID_PARAMETER_VALUE` response for these endpoints has been corrected.
 - The issue with "Mail Thread" invokes showing errors in the mapper has been resolved. The error "exception Duplicated definition for: 'InRefTo'" has been fixed.
 - The issue where some Mail module operations would produce error responses from the Oracle Aconex system has been resolved. The error `<ErrorCode>URL_UNKNOWN</ErrorCode>` has been fixed, and the operations are now working properly.
- **User Roles**
 - The issues with the following User Role API operations have been resolved, and users can now successfully create invokes:
 - * Update User Role (Project)
 - * Update Secured Asset Permissions (Organization)
 - * Update Secured Asset Permissions (Project)
 - * Update Users Assigned to User Role (Organization)
 - * Update Users Assigned to User Role (Project)
 - * Delete User Role (Organization)
 - * Delete User Role (Project)
 - The Operations Page Wizard failures have been fixed, and all of the above operations are now working properly.

Oracle Aconex Cloud Adapter Use Cases

The Oracle Aconex Cloud Adapter streamlines integration between Oracle Aconex and other applications. It provides comprehensive capabilities across various API modules and ensures efficient and accurate synchronization of critical project data.

The Oracle Aconex Cloud Adapter can be used in the following scenarios:

- **Document Management:** The adapter facilitates the integration flows for uploading documents to Oracle Aconex. It automates the upload process to ensure all necessary documents, including metadata and required fields are available in Oracle Aconex. It also supports keeping the documents current by using the adapter suppression and update operations. Additionally, the adapter provides the ability to interrogate the information of a document, which is critical for reporting.

- **Mail Management:** The adapter automates mail operations, such as creating, replying, and viewing of mail content and metadata based on actions in your source application. This automation streamlines communication and ensures that the important project information is appropriately addressed. Additionally, the adapter can integrate mail attachment downloads into the target application workflow, ensuring all relevant attachments are saved and accessible. This enhances information availability and improves project documentation. The adapter also facilitates the viewing and management of mail metadata and schemas, keeping mail-related information organized and easily accessible.
- **Project Management:** The adapter automates the process of inviting users to projects in Oracle Aconex, based on changes in the source application, ensuring efficient and accurate user management across your project teams.
- **Project Fields Management:** The adapter automates creation, editing, enabling, and disabling of project fields in Oracle Aconex. This ensures that all necessary project fields are accurately maintained and updated in line with the source application project requirements.
- **Task Management:** The adapter integrates tasks from Oracle Aconex into the primary project management tool, keeping all task-related information synchronized.
- **User Role Management:** The adapter can be used for updating user roles across systems by synchronizing role assignments. This helps maintain correct user permissions and access levels across various project management tools. Additionally, it can automate the process of managing user roles within Oracle Aconex based on changes in the source application, ensuring efficient and accurate user management across the project teams.
- **Workflow Integration:** The adapter can create integration flows that track workflow status changes in Oracle Aconex, keeping the target project management tool updated with the latest status and ensuring better tracking and management of project workflows.

What Application Version Is Supported?

For information about which application version is supported by this adapter, see the [Connectivity Certification Matrix](#).

Workflow to Create and Add a Connection to an Integration

You follow a very simple workflow to create a connection with an adapter and include the connection in an integration in Oracle Integration.

This table lists the workflow steps for both adapter tasks and overall integration tasks, and provides links to instructions for each step.

Step	Description	More Information
1	Access Oracle Integration.	Go to <code>https://instance_URL/ic/home</code>
2	Create the adapter connections for the applications you want to integrate. The connections can be reused in multiple integrations and are typically created by the administrator.	Create an Oracle Aconex Cloud Adapter Connection
3	Create the integration. When you do this, you add trigger (source) and invoke (target) connections to the integration.	Create Integrations in <i>Using Integrations in Oracle Integration 3</i> and Add the Oracle Aconex Cloud Adapter Connection to an Integration

Step	Description	More Information
4	Map data between the trigger connection data structure and the invoke connection data structure.	Map Data in <i>Using Integrations in Oracle Integration 3</i>
5	(Optional) Create lookups that map the different values used by those applications to identify the same type of object (such as gender codes or country codes).	Manage Lookups in <i>Using Integrations in Oracle Integration 3</i>
6	Activate the integration.	Activate an Integration in <i>Using Integrations in Oracle Integration 3</i>
7	Monitor the integration on the dashboard.	Monitor Integrations During Runtime in <i>Using Integrations in Oracle Integration 3</i>
8	Track payload fields in messages during runtime.	Assign Business Identifiers for Tracking Fields in Messages and Track Integration Instances in <i>Using Integrations in Oracle Integration 3</i>
9	Manage errors at the integration level, connection level, or specific integration instance level.	Manage Errors in <i>Using Integrations in Oracle Integration 3</i>

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Create an Oracle Aconex Cloud Adapter Connection

A connection is based on an adapter. You define connections to the specific cloud applications that you want to integrate.

Topics:

- [Prerequisites for Creating a Connection](#)
- [Create a Connection](#)

Prerequisites for Creating a Connection

Every integration with Oracle Aconex APIs must be registered with Oracle using Basic Authentication. You will receive the credentials required to uniquely identify the integration.

Oracle Aconex Customers

Oracle Aconex customers have two options for testing their integrations before enabling them in production on their live projects:

- **Early Access Environment:** Oracle provides an Early Access (EA) environment for testing Smart Construction Platform integrations in a non-production environment.
- **Training and Practice Project:** Every Oracle Aconex instance has a Training and Practice project available for you to use. Your Oracle contact can arrange an invitation to it upon request.

For the **EA approach**, your integration journey would be:

1. Register your organization in the EA environment.
2. Create test users and test data in EA.
3. [Register your integration](#) in EA.
4. Complete your integration testing in EA.
5. Register your integration in production.
6. Go live in production by deploying a separate production version.

For the **Training and Practice** approach, your integration journey would be:

1. Register your integration in production.
2. Request access to the Training and Practice project.
3. Complete your integration testing using the Training and Practice project.
4. Go live by connecting to your live projects.

Oracle Technology Partners

Oracle Technology Partners must join the Oracle Partner Network (OPN) and complete their testing in the EA environment before publishing to production. Your published integration will be available to all users.

Oracle Technology Partners' integration journey looks like this:

1. Join the [Oracle PartnerNetwork](#) (OPN).
2. Register your organization on the EA environment.
3. Create test users and test data in EA.
4. Register an integration in EA.
5. Complete your integration testing in EA.
6. Publish your integration to production.

For more information, see [Getting started with APIs](#) in the Oracle Aconex [REST API documentation](#).

Create a Connection

Before you can build an integration, you must create the connections to the applications with which you want to share data.

To create a connection in Oracle Integration:

1. In the navigation pane, click **Design**, then **Connections**.
2. Click **Create**.

Note:

You can also create a connection in the integration canvas. See Define Inbound Triggers and Outbound Invokes.

3. In the Create connection panel, select the adapter to use for this connection. To find the adapter, scroll through the list, or enter a partial or full name in the **Search** field.
4. Enter the information that describes this connection.

Element	Description
Name	Enter a meaningful name to help others find your connection when they begin to create their own integrations.
Identifier	Automatically displays the name in capital letters that you entered in the Name field. If you modify the identifier name, don't include blank spaces (for example, SALES OPPORTUNITY).

Element	Description
Role	<p>Select the role (direction) in which to use this connection (trigger, invoke, or both). Only the roles supported by the adapter are displayed for selection. When you select a role, only the connection properties and security policies appropriate to that role are displayed on the Connections page. If you select an adapter that supports both invoke and trigger, but select only one of those roles, you'll get an error when you try to drag the adapter into the section you didn't select.</p> <p>For example, assume you configure a connection for the Oracle Service Cloud (RightNow) Adapter as only an invoke. Dragging the adapter to a trigger section in the integration produces an error.</p>
Keywords	Enter optional keywords (tags). You can search on the connection keywords on the Connections page.
Description	Enter an optional description of the connection.
Share with other projects	<p>Note: This field only appears if you are creating a connection in a project.</p> <p>Select to make this connection publicly available in other projects. Connection sharing eliminates the need to create and maintain separate connections in different projects.</p> <p>When you configure an adapter connection in a different project, the Use a shared connection field is displayed at the top of the Connections page. If the connection you are configuring matches the same type and role as the publicly available connection, you can select that connection to reference (inherit) its resources. See Add and Share a Connection Across a Project.</p>

5. Click **Create**.

Your connection is created. You're now ready to configure the connection properties, security policies, and (for some connections) access type.

Configure Connection Properties

Enter connection information so your application can process requests.

1. Go to the **Properties** section.
2. In the **Aconex instance URL** field, enter the URL of your Oracle Aconex instance.
This is the physical location where your project data is stored.
3. From the **Connection Type** list, select **REST API Base URL**.

Configure Connection Security

Configure security for your connection.

1. Go to the **Security** section.
2. In the **User Name** field, enter the user name of your Oracle Aconex integration user account.
3. In the **Password** field, enter the password of your Oracle Aconex integration user account.

Test the Connection

Test your connection to ensure that it's configured successfully.

1. In the page title bar, click **Test**.
The test starts automatically and validates the inputs you provided for the connection.
2. Wait for a message about the results of the connection test.
 - If the test was successful, then the connection is configured properly.
 - If the test failed, then edit the configuration details you entered. Check for typos and verify URLs and credentials. Continue to test until the connection is successful.
3. When complete, click **Save**.

3

Add the Oracle Aconex Cloud Adapter Connection to an Integration

When you select and place the Oracle Aconex Cloud Adapter into the invoke area of an integration, the Adapter Endpoint Configuration Wizard opens. This wizard guides you through configuration of the Oracle Aconex Cloud Adapter endpoint properties.

The following wizard pages guide you through configuration of the Oracle Aconex Cloud Adapter as an invoke in an integration.

Topics:

- [Basic Info Page](#)
- [Configure Operations Page](#)
- [Summary Page](#)

Basic Info Page

Enter the endpoint name, description, and select an API module.

Element	Description
What do you want to call your endpoint?	Provide a meaningful name so that others can understand the responsibilities of this connection. You can include English alphabetic characters, numbers, underscores, and hyphens in the name. You can't include the following characters: <ul style="list-style-type: none">• No blank spaces (for example, My Inbound Connection)• No special characters (for example, #;83& or righ(t)now4) except underscores and hyphens• No multibyte characters
What does this endpoint do?	Enter an optional description for the connection's functionality. For example: <code>This endpoint executes a search of an organization's document register for a project.</code>
Select API module	Select the Oracle Aconex service API module you want from the list.

Configure Operations Page

Specify the operation that you want your selected API module to perform.

Element	Description
Select Operation	Select which operation you want the selected Oracle Aconex API service module to perform. Each API module offers specific operations that you can perform.

Element	Description
Operation Description	Upon selection of the operation, a brief description is provided to help understand its functionality.

Summary Page

You can review the specified adapter configuration values on the Summary page.

This page presents a summary of the configuration values defined on the previous pages of the wizard. Additionally, based on the selected operation, it dynamically displays the request and response data associated with that specific operation. Each line provides a comprehensive overview of the configured settings and the expected data interactions specific to that operation.

To return to a previous page to update any values, click the appropriate tab in the left panel or click **Go back**.

To cancel your configuration details, click **Cancel**.