

# Oracle® Cloud

## Using the Automation Anywhere Adapter with Oracle Integration Generation 2



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The Oracle logo, consisting of the word "ORACLE" in white, uppercase, sans-serif font, centered within a solid red square.

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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 <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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## Diversity and Inclusion

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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  
<http://cloud.oracle.com>
- *Using Integrations in Oracle Integration Generation 2*
- *Using the Oracle Mapper with Oracle Integration Generation 2*

## 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.

# 1

## Understand the Automation Anywhere Adapter

Review the following conceptual topics to learn about the Automation Anywhere 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:

- [Automation Anywhere Adapter Capabilities](#)
- [What Application Version Is Supported?](#)
- [About Automation Anywhere Adapter Use Cases](#)
- [Workflow to Create and Add an Automation Anywhere Adapter Connection to an Integration](#)



### Note:

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

## Automation Anywhere Adapter Capabilities

The Automation Anywhere Adapter enables you to create an integration in Oracle Integration.

You can use this adapter to integrate application objects with the Automation Anywhere Control Room and simplify application development by providing a standard interface for adding items to queues, starting bots (automation scripts), and fetching bot status and results.

The Automation Anywhere Adapter is one of many predefined adapters included with Oracle Integration. You can configure this adapter as a target (invoke) connection in an integration flow; however, adding it as a source (trigger) is not supported.

## What Application Version Is Supported?

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

See [Connectivity Certification Matrix](#).

## About Automation Anywhere Adapter Use Cases

You can use the Automation Anywhere Adapter in the following scenarios.

## Integrate with Applications without Adapters or APIs

The Automation Anywhere Adapter offers a way to integrate with applications that don't have an adapter in Oracle Integration and don't expose APIs.

This adapter simplifies the discovery of bots that have been created and deployed in Automation Anywhere Control Room. Bots, created with RPA technology, can be invoked from an integration flow to interact with applications and systems previously unreachable to Oracle Integration. Using the adapter, you can add work items to queues, instruct bots to begin execution, and receive responses from bots.

Similarly, you can employ the Automation Anywhere Adapter to utilize an application's modified or extended functionality that's not accessible through APIs or other adapters.

## Automate Repetitive Human Tasks

You can use the Automation Anywhere Adapter to automate simple repetitive tasks usually performed by a human.

RPA bots can efficiently perform repetitive tasks, like data entry, that don't involve decision making. In Oracle Integration, you can trigger these transactions automatically using the Automation Anywhere Adapter.

## Workflow to Create and Add an Automation Anywhere Adapter 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.	<a href="#">Create an Automation Anywhere Adapter Connection</a>
3	Create the integration. When you do this, you add invoke (target) connections to the integration.	Create Integrations of <i>Using Integrations in Oracle Integration Generation 2</i> and <a href="#">Add the Automation Anywhere Adapter Connection to an Integration</a>
4	Map data between the trigger connection data structure and the invoke connection data structure.	Map Data in <i>Using Integrations in Oracle Integration Generation 2</i>

Step	Description	More Information
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 Generation 2</i>
6	Activate the integration.	Activate Integrations in <i>Using Integrations in Oracle Integration Generation 2</i>
7	Monitor the integration on the dashboard.	Monitor Integrations in <i>Using Integrations in Oracle Integration Generation 2</i>
8	Track payload fields in messages during runtime.	Assign Business Identifiers for Tracking Fields in Messages and Manage Business Identifiers for Tracking Fields in Messages in <i>Using Integrations in Oracle Integration Generation 2</i>
9	Manage errors at the integration level, connection level, or specific integration instance level.	Manage Errors in <i>Using Integrations in Oracle Integration Generation 2</i>

# 2

## Automation Anywhere Adapter Concepts

Learn about Robotic Process Automation (RPA) and Automation Anywhere.

**Topics:**

- [About Robotic Process Automation](#)
- [Automation Anywhere Concepts](#)

### About Robotic Process Automation

Robotic Process Automation (RPA) is a technology that uses robots to interact with application user interfaces.

Using RPA, you can create UI scripts (robots) that reproduce actions in the interface as if a human user is performing them. After a script is created, it can be replayed using different input parameters and on different devices.

Robots or automated scripts can run on any application that has a user interface, including web apps, character-oriented terminal applications, and native Windows applications.

### Automation Anywhere Concepts

Refer to the Automation Anywhere documentation to learn about concepts, such as environments (Client and Control Room), roles (Bot Creator, Bot Runner, Queue Admin, etc.), bots, and queues.

See Automation Anywhere Documentation.

# 3

## Create an Automation Anywhere Adapter Connection

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

### Topics:

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

## Prerequisites for Creating a Connection

You must satisfy the following prerequisites to create a connection to the Automation Anywhere Adapter.

You must first ensure that your Automation Anywhere Control Room instance is configured to allow you to invoke bots using the public Automation Anywhere REST APIs. See [Automation Anywhere Documentation](#).

Next, ensure that you meet the following conditions in your Automation Anywhere Control Room instance:

- Have at least one bot uploaded to the Control Room from an Automation Anywhere Client machine.
- Have at least one device (Client machine) connected to the Control Room as a Bot Runner.
- For running a bot with queue, create a queue, specify the work item structure and other details for it, and associate it with a device pool.

## Create a Connection

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

To create a connection in Oracle Integration:

1. In the left navigation pane, click **Home > Integrations > Connections**.
2. Click **Create**.

 **Note:**

You can also create a connection in the integration canvas of:

- An orchestrated integration (See Define Inbound Triggers and Outbound Invokes.)
- A basic routing integration (See Add a Trigger (Source) Connection.)

3. In the Create Connection — Select Adapter dialog, 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 and click

**Search.**

4. In the Create Connection dialog, enter the information that describes this connection.
  - a. Enter a meaningful name to help others find your connection when they begin to create their own integrations. The name you enter is automatically added in capital letters to the **Identifier** field. If you modify the identifier name, don't include blank spaces (for example, SALES OPPORTUNITY).
  - b. Enter optional keywords (tags). You can search on the connection keywords on the Connections page.
  - c. 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. For example, let's say 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.
  - d. Enter an optional description of the connection.
5. Click **Create**.

Your connection is created. You're now ready to configure the connection details, such as connection properties, security policies, connection login credentials, and (for certain connections) agent group.

## Configure Connection Properties

Enter connection information so your application can process requests.

1. Go to the **Connection Properties** section.
2. In the **Control Room URL** field, specify the URL you use to sign in to the Automation Anywhere Control Room. For example, `http://52.191.169.22`.

## Configure Connection Security

Configure security for your Automation Anywhere Adapter connection by providing your sign in credentials.

1. Go to the **Security** section.
2. Enter your sign in credentials:
  - a. Enter a username and password to connect to the Automation Anywhere Control Room.
  - b. Reenter the password a second time.

## Test the Connection

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

1. In the page title bar, click **Test**. What happens next depends on whether your connection uses a Web Services Description Language (WSDL) file.

If Your Connection...	Then...
Doesn't use a WSDL	The test starts automatically and validates the inputs you provided for the connection.
Uses a WSDL	A dialog prompts you to select the type of connection testing to perform: <ul style="list-style-type: none"><li>• <b>Validate and Test:</b> Performs a full validation of the WSDL, including processing of the imported schemas and WSDLs. Complete validation can take several minutes depending on the number of imported schemas and WSDLs. No requests are sent to the operations exposed in the WSDL.</li><li>• <b>Test:</b> Connects to the WSDL URL and performs a syntax check on the WSDL. No requests are sent to the operations exposed in the WSDL.</li></ul>

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, verify URLs and credentials, and download the diagnostic logs for additional details. Continue to test until the connection is successful.
3. When complete, click **Save**.

# 4

## Add the Automation Anywhere Adapter Connection to an Integration

When you drag the Automation Anywhere Adapter into the invoke area of an integration, the Adapter Endpoint Configuration Wizard appears. This wizard guides you through configuration of the Automation Anywhere Adapter endpoint properties.

The following sections describe the wizard pages that guide you through configuration of the Automation Anywhere Adapter as an invoke in an integration.

### Topics:

- [Basic Info Page](#)
- [Automation Anywhere Adapter Configuration Page](#)
- [Summary Page](#)

## Basic Info Page

You can enter a name and description on the Basic Info page of each adapter in your integration.

Element	Description
<b>What do you want to call your endpoint?</b>	<p>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:</p> <ul style="list-style-type: none"><li>• No blank spaces (for example, My Inbound Connection)</li><li>• No special characters (for example, #;83&amp; or righ(t)now4) except underscores and hyphens</li><li>• No multibyte characters</li></ul>
<b>What does this endpoint do?</b>	<p>Enter an optional description of the connection's responsibilities. For example:</p> <pre>This connection receives an inbound request to synchronize account information with the cloud application.</pre>

## Automation Anywhere Adapter Configuration Page

On the Configuration page, you can select the type of bot you want to run and enter details corresponding to your selection.

Element	Description
<b>Bot associated with queue</b>	Select one of the available options to choose the type of bot to run: <ul style="list-style-type: none"><li>• Select <b>Yes</b> to run a bot associated with a queue.</li><li>• Select <b>No</b> to run a standalone bot.</li></ul>
<b>Wait for response</b>	Select this option to wait until a work item's execution is completed by a bot (or until a bot's execution is completed—in case of standalone bots) before the integration proceeds to the next action in the flow (a synchronous pattern). The integration waits for two minutes and returns an exception if the work item's execution isn't completed in this time period.

 **Note:**

The two-minute timeout includes both the time spent in the queue (by a work item) and a bot's execution time.

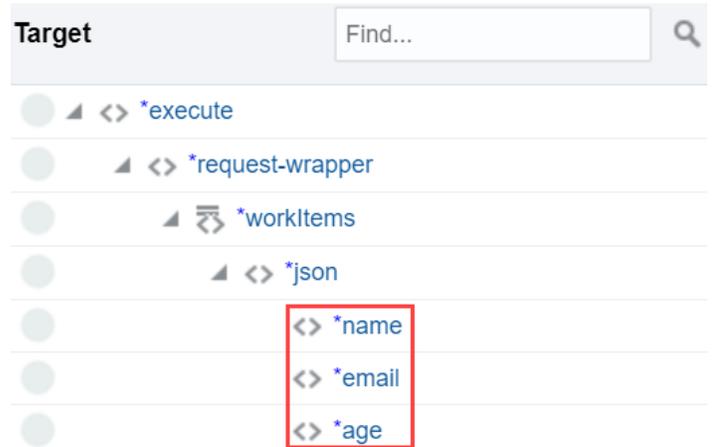
If you don't select this option the next action in the integration flow is executed immediately (an asynchronous pattern).

Element	Description
<b>Queue</b> (Bots associated with a queue)	Select a queue available in the Control Room to add work items to.  For bots associated with a queue, you must specify a queue to pass parameters to or receive parameters from the bot. In Automation Anywhere, the data you receive from the bots is limited to the status of execution and an output or result string.

 **Note:**

Ensure you select a queue that has a bot associated with it; otherwise, no bots will be executed.

Element	Description
<b>WorkItem Structure</b> (Bots associated with a queue)	<p>Specify the structure of the work item you want the integration to pass to the bot. List the data elements of the structure as comma-separated values; for example: name,email,age. The work item from the integration is placed in the queue you selected, and it's run by the bot associated with this queue on a Client machine from the device pool.</p> <p>When configuring the mapping for this adapter, the elements you specify here appear as children to the <b>workitems</b> element in the <b>Target</b> panel.</p>



**Note:**

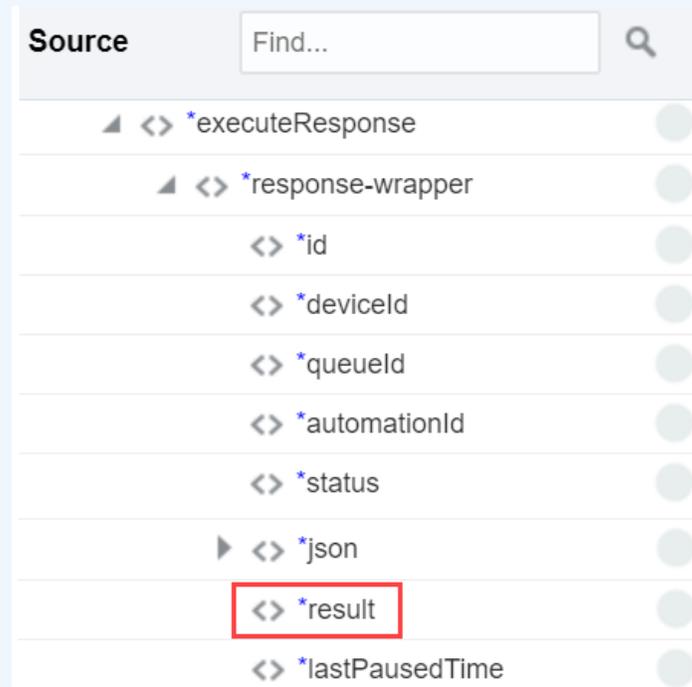
- The work item structure you enter here must exactly match the one defined for the queue in the Control Room. This structure indicates the specific set of data that the bot expects.
- Ensure that you accurately map work items with

Element	Description
	<p>the input data from the integration. The Control Room returns an error if work items are empty or null.</p>
<b>Bot</b> (Bots <i>not</i> associated with a queue)	<p>Select the standalone bot you want to invoke in the Control Room.</p> <p> <b>Note:</b> Ensure you select a bot not associated with a queue.</p>
<b>Device Id</b> (Bots <i>not</i> associated with a queue)	<p>Specify the ID of the device (that is, the Bot Runner Client machine) on which you want to run the bot.</p> <p> <b>Note:</b> Ensure you specify the ID of a device that's not associated with a device pool and is of the type Bot Runner.</p>

 **Note:**

With Automation Anywhere, you cannot specify a custom output/result structure you expect from a bot. By default, the response result is a single, plain string. This result is placed in the queue you selected and is made available for mapping.

When configuring mappings from this adapter, the response elements—including the **result**—appear as children to the **response-wrapper** in the **Source** panel.



Besides, if you've chosen not to wait for a response in case of a standalone bot, you receive only the *automationId* as response.

## Summary Page

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

Element	Description
<b>Summary</b>	<p>Displays a summary of the configuration values you defined on previous pages of the wizard.</p> <p>The information that is displayed can vary by adapter. For some adapters, the selected business objects and operation name are displayed. For adapters for which a generated XSD file is provided, click the XSD link to view a read-only version of the file.</p> <p>To return to a previous page to update any values, click the appropriate tab in the left panel or click <b>Back</b>.</p> <p>To cancel your configuration details, click <b>Cancel</b>.</p>

# 5

## Automation Anywhere Adapter Samples

You can use the Automation Anywhere Adapter in end-to-end scenarios such as the following:

**Topics:**

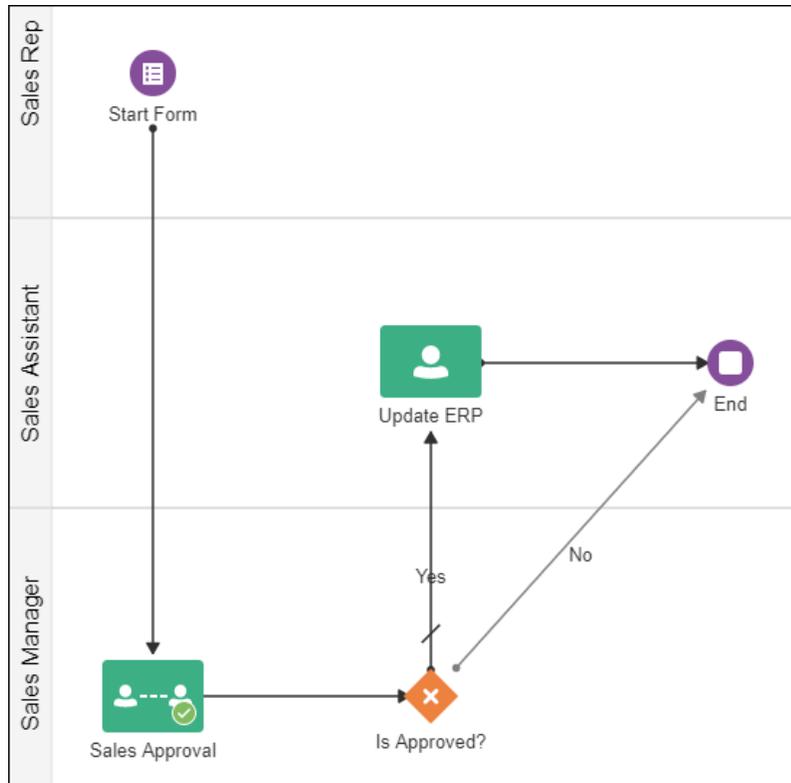
- [Accelerate Process Automation](#)

### Accelerate Process Automation

If your company uses legacy ERP or CRM systems (systems that don't have an adapter in Oracle Integration and don't expose APIs), you can use the Automation Anywhere RPA adapter to extend your process automation capabilities to these systems and eliminate repetitive, error-prone tasks of manually updating them, each time there's a new order or change in customer data.

Let's consider a simple example to illustrate how you can leverage the Automation Anywhere RPA adapter to accelerate process automation, mitigate risks, and yet retain full control of your processes.

The following figure shows an example sales process in an organization with a legacy ERP application. To begin with, a sales representative initiates a request to sell a certain item that's under controlled availability (for example, a new line of laptops) to a customer. The representative provides all the required information about the customer and the order through a web form. This request is then forwarded to a sales manager for approval. If approved, a human task is initiated to update the order details in the ERP system. Now, a sales assistant performs a set of repetitive tasks to update the ERP application, such as logging into the application, navigating screens, moving files, copying and pasting data between applications, and so on.



In a large organization that receives hundreds of sales requests in a day, manually updating the ERP and several other legacy systems can create a huge backlog and cause significant delays in order processing, which may ultimately result in loss of sales opportunities. Additionally, these manual tasks could potentially introduce processing errors into the system.

Using Automation Anywhere, you can create bots to automate such repetitive manual tasks. Through an Automation Anywhere Client installed on a machine, you can connect to the Automation Anywhere Control Room, which is a web-based platform where bots are deployed and bot-queue associations are defined; you can connect to the Control Room either as a Bot Creator or Bot Runner. As a Bot Creator on the Client, you'll be able to create bots that record screen actions, such as logging into applications, navigating screens, copy-pasting data, and so on. Finally, you can upload the bots to the Control Room. Subsequently, from the Control Room, you can replay these bots on the required devices (that is, Client machines registered as Bot Runners) and also use different input parameters for each run.

You can trigger these bots at any stage of an Oracle Integration process using the Automation Anywhere RPA adapter. Use the RPA adapter in Oracle Integration to create a connection to the Control Room. Then use this connection to create an integration to Automation Anywhere by specifying the type of bot to execute and the corresponding details. See Automation Anywhere Documentation and Create Integrations in *Using Integrations in Oracle Integration Generation 2*.

Within your process in Oracle Integration, you can use the Automation Anywhere RPA integration through a Bot Activity. In the example discussed here, you can replace the human task of updating the ERP system with a Bot Activity, and map this activity to an activated RPA integration. See Work with Bot Activities in *Using Processes in Oracle Integration Generation 2*.

In addition, when an Automation Anywhere bot finishes its execution, you can bring the flow back to the process in Oracle Integration and maintain complete control of your business workflow. You can also introduce a backup flow for review or escalations, in case of exceptions or errors encountered while executing bots. Thus, you can combine Automation Anywhere RPA with Oracle Integration to create highly-efficient and reliable end-to-end process automation, thereby boosting workforce productivity and customer service.

