Oracle® Cloud

Using the Amazon Simple Storage Service (S3) Adapter with Oracle Integration 3

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Contents

1   Understand the Amazon Simple Storage Service (S3) Adapter

2   Create an Amazon Simple Storage Service (S3) Adapter Connection

3   Add the Amazon Simple Storage Service (S3) Adapter Connection to an Integration

4   Troubleshoot the Amazon Simple Storage Service (S3) Adapter

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 Integration documentation on the Oracle Help Center.

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.
italic	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 Amazon Simple Storage Service (S3) Adapter

Review the following topics to learn about the Amazon Simple Storage Service (S3) 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:

- Amazon Simple Storage Service (S3) Adapter Capabilities
- What Application Version Is Supported?
- Workflow to Create and Add an Amazon Simple Storage Service (S3) Adapter Connection to an Integration

Amazon Simple Storage Service (S3) Adapter Capabilities

The Amazon Simple Storage Service (S3) Adapter enables you to create an integration in Oracle Integration that connects to the AWS application. You can configure the Amazon Simple Storage Service (S3) Adapter as an invoke connection in an integration in Oracle Integration.

The Amazon Simple Storage Service (S3) Adapter provides the following capabilities:

- Enables the following actions on supported resources (that is, bucket and object):
    - List Buckets
    - Create Bucket
    - Delete Bucket
    - List Objects
    - Put Object
    - Get Object
    - Copy Object
    - Delete Object
- Enables you to upload and download attachments (objects) using the Put Object and Get Object actions.
- Provides an option to delete an object after downloading.
- Supports the AWS Signature Version 4 security policy.
- Supports integration with publicly-accessible resources (direct connectivity over the public internet) and private resources using the connectivity agent.

The Amazon Simple Storage Service (S3) Adapter is one of many predefined adapters included with Oracle Integration. See the Adapters page in the Oracle Help Center.

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 an Amazon Simple Storage Service (S3) 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 `https://instance_URL/ic/home`
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 Amazon Simple Storage Service (S3) Adapter Connection
3	Create the integration. When you do this, you add trigger (source) and invoke (target) connections to the integration.	Understand Integration Creation and Best Practices in *Using Integrations in Oracle Integration 3* and Add the Amazon Simple Storage Service (S3) Adapter Connection to an Integration
4	Map data between the trigger connection data structure and the invoke connection data structure.	Map Data in *Using Integrations in Oracle Integration 3*
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 *Using Integrations in Oracle Integration 3*
6	Activate the integration.	Activate an Integration in *Using Integrations in Oracle Integration 3*
7	Monitor the integration on the dashboard.	Monitor Integrations During Runtime in *Using Integrations in Oracle Integration 3*
8	Track payload fields in messages during runtime.	Assign Business Identifiers for Tracking Fields in Messages and Track Integration Instances in *Using Integrations in Oracle Integration 3*
9	Manage errors at the integration level, connection level, or specific integration instance level.	Manage Errors in *Using Integrations in Oracle Integration 3*

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2

Create an Amazon Simple Storage Service (S3) 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

You must satisfy the following prerequisites to create a connection with the Amazon Simple Storage Service (S3) Adapter:

- Create an AWS Account
- Create an Inline Policy
- Create an IAM User and Obtain the Access Key and Secret Access Key

Create an AWS Account

1. Go to https://aws.amazon.com.
2. Click **Create an AWS Account**.
3. Enter a root user email address.
4. Enter a name for your account in the **AWS account name** field.
5. Click **Verify email address**.
6. Once the email address is verified, create your root user password.
7. In the subsequent steps, enter your contact information and billing information details.
8. Complete the transaction to successfully create a root user account.
   You can now sign in to your AWS Account using the root user credentials.

> **✎ Note:**
>
> The root user possesses unrestricted access to AWS resources. It is necessary to create an Identity and Access Management (IAM) user.

Create an Inline Policy

1. Click **IAM** and select **Policies** under **Access management**.
2. Select **Attach policies directly** on the Set permissions page.
3. In the **Permissions policies** section, click **Create policy**.

4. On the Specify permissions page that opens, select **S3** as a **Service**.

5. In the **Actions allowed** section, select the **ListAllMyBuckets** check box as the **Access level** for your resource in S3.

> **Note:**
>
> This is the minimum permission required for you to create the connection. You can add more permissions as per the actions you want to invoke. For example, if you want to create a bucket, the corresponding permission (create bucket) must be added to the new or existing policy.

6. Click **Next**.

7. Enter the policy name and click **Create Policy**.
   The newly created policy is added to the list on the Policies Page.

Create an IAM User and Obtain the Access Key and Secret Access Key

1. Log in to an AWS account using the root user credential.

2. In the search bar, enter `IAM`.

3. Click **IAM** and select **Users** under **Access management**.

4. Click **Create user**.

5. Enter a name for the user and click **Next**.

6. On the Set Permissions page that appears, perform the following:

   a. Select **Attach policies directly** as the **Permissions Options**.

   b. Select the permission policies that you created for this user and click **Next**. See Create an Inline Policy .

   c. (Optional step) Set a permissions boundary under **Set permissions boundary**, and click **Next**.

7. (Optional step) Add tags to AWS resources.

8. Click **Create User**.

9. Navigate to **Dashboard**, then **Access management**, and then **Users**. The newly created user appears in the list.

10. Select the user in the **User name** column.

11. On the User Info page, select **Create access key** in the **Summary** section.

12. Under **Access key best practices & alternatives**, select the use case according to your requirement, and click **Next**.

13. (Optional step) Provide a description tag, if required, and click **Next**.
    The `Access key created` message appears.

    The **Access Key** and **Secret Access Key** are displayed.

14. Copy the access key ID and secret key.

> **Note:**
>
> You must enter the access key in the **Access Key** field and the secret key in the **Secret Access Key** field on the Connections page. See Configure Connection Security.

15. Alternatively, you can click **Download .csv file** to download a file that contains the access key ID and the secret key.

16. Click **Done**.

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	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, 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.
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	**Note**: This field only appears if you are creating a connection in a project.
	Select to make this connection publicly available in other projects. Connection sharing eliminates the need to create and maintain separate connections in different projects.
	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.

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 **AWS Region** field, enter the region you selected in the AWS Management console. For example: `ap-south-1`.

   > ✎ **Note:**
   >
   > AWS regions are various geographical locations where the AWS infrastructure is located. Select the nearest possible area to minimize delays or the unavailability of resources.

Configure Connection Security

Configure security for your Amazon Simple Storage Service (S3) Adapter connection.

1. Go to the **Security** section.

2. In the **Access Key** field, enter the access key obtained after performing the prerequisite steps. See Prerequisites for Creating a Connection.

3. In the **Secret Key** field, enter the secret key obtained after performing the prerequisite steps. See Prerequisites for Creating a Connection.

4. In the **AWS Region** field, select the same AWS region that you entered in the **Properties** section. See Configure Connection Properties.

> **✎ Note:**
>
> Once you enter the configuration details, including connection and security properties, ensure that you save the connection before testing it. Otherwise, an error is displayed. See Error While Testing the Connection.

Configure the Endpoint Access Type

Configure access to your endpoint. Depending on the capabilities of the adapter you are configuring, options may appear to configure access to the public internet, to a private endpoint, or to an on-premises service hosted behind a fire wall.

Select the Endpoint Access Type

Select the option for accessing your endpoint.

Option	This Option Appears If Your Adapter Supports ...
Public gateway	Connections to endpoints using the public internet.
Connectivity agent	Connections to on-premises endpoints through the connectivity agent. 1. Click **Associate agent group**. The Associate agent group panel appears. 2. Select the agent group, and click **Use**. To configure an agent group, you must download and install the on-premises connectivity agent. See Download and Run the Connectivity Agent Installer and About Creating Hybrid Integrations Using Oracle Integration in *Using Integrations in Oracle Integration 3*.

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 adapter connection uses a Web Services Description Language (WSDL) file. Only some adapter connections use WSDLs.

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: • **Validate and Test**: 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. • **Test**: Connects to the WSDL URL and performs a syntax check on the WSDL. No requests are sent to the operations exposed in the WSDL.

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 Amazon Simple Storage Service (S3) Adapter Connection to an Integration

When you drag the Amazon Simple Storage Service (S3) Adapter into the invoke area of an integration, the Adapter Endpoint Configuration Wizard is invoked. This wizard guides you through configuration of the Amazon Simple Storage Service (S3) Adapter endpoint properties.

The following sections describe the wizard pages that guide you through configuration of the Amazon Simple Storage Service (S3) Adapter as an invoke in an integration.

Topics:

- Basic Info Page
- Configuration Page
- Summary Page

Basic Info Page

Specify a name, description, and subscription type on the Basic Info page for each trigger connection in your integration.

Element	Description
What do you want to call your endpoint?	Provide a meaningful name so that others can understand the connection. For example, if you are creating a database connection for adding new employee data, you may want to name it `CreateEmployeeInDB`. You can include English alphabetic characters, numbers, underscores, and dashes in the name. You cannot include the following: • Blank spaces (for example, `My DB Connection`) • Special characters (for example, `#;83&` or `righ(t)now4`) except underscores and hyphens • Multibyte characters
What does this endpoint do?	Enter an optional description of the connection's responsibilities.
Select Categories	Select a storage resource. The supported entities are: • **Bucket** • **Object**
Action	Select an action to perform, such as **List Object**, **Put Object**, **List Bucket**, or **Create Bucket**, for the selected category. The actions available for selection are based on the selected categories.

Configuration Page

Element	Description
Provide Bucket Name	Enter the name of the bucket in which you want to perform an operation. A bucket name is required for operations, such as **Delete Object**, **List Objects**, **Put Object**, **Get Object**, and **Delete Bucket**. **Note**: The bucket name should belong to the same region you provided on the Connections page.
Provide Object Name (Displayed if the **Get Object** action is selected on the Basic Info page.)	Enter the object name. An object name is required to perform the **Get Object** operation.
Delete after download (Displayed if the **Get Object** action is selected on the Basic Info page.)	Select this check box to delete an object after it has been downloaded from AWS.
Provide Source Bucket Name (Displayed if the **Copy Object** action is selected on the Basic Info page.)	Enter the source bucket name from which you want to copy an object. **Note**: The bucket name should belong to the same region you provided on the Connection page.
Provide Source Object Name (Displayed if the **Copy Object** action is selected on the Basic Info page.)	Enter the name of the object that you want to copy. The object name should match the bucket provided in the **Provide Source Bucket Name** field when performing the **Copy Object** operation.
Provide Target Bucket Name (Displayed if the **Copy Object** action is selected on the Basic Info page.)	Enter the target bucket name in which you want to copy the object.

Summary Page

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

Element	Description
Summary	Displays a summary of the configuration values you defined on previous pages of the wizard. 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. 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**.

4

# Troubleshoot the Amazon Simple Storage Service (S3) Adapter

Review the following topics to learn about troubleshooting issues with the Amazon Simple Storage Service (S3) Adapter.

Topics:

• Error While Testing the Connection

Error While Testing the Connection

The following error is displayed if you test the Amazon Simple Storage Service (S3) Adapter connection without first saving the connection.
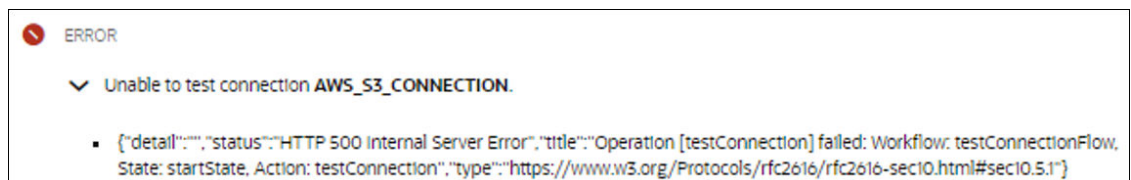
Solution: Once you enter the connection configuration details on the Connections page, including connection and security properties, ensure that you save the connection *before* testing it. See Create an Amazon Simple Storage Service (S3) Adapter Connection.