

## **Oracle® Cloud**

Using the SOAP Adapter

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## 5 Creating Mappings and Lookups in Integrations

## 6 Administering Integrations

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# Preface

*Using the SOAP Adapter* describes how to use the SOAP Adapter as a connection in your integration.

## Topics:

- [Audience](#)
- [Related Resources](#)
- [Conventions](#)

## Audience

*Using the SOAP Adapter* is intended for users who want to use the Oracle SOAP Cloud adapter in integrations.

## Related Resources

For more information, see these Oracle resources:

- Oracle Cloud  
<http://cloud.oracle.com>
- *Using Oracle Integration Cloud Service*
- *Using the Oracle Mapper*

## 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.



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# Getting Started with the SOAP Adapter

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

## Topics

- [SOAP Adapter Capabilities](#)
- [What Application Version Does the SOAP Adapter Support?](#)
- [About Oracle Integration Cloud Service](#)
- [About Oracle Integration Cloud Service Connections](#)
- [About Oracle Integration Cloud Service Integrations](#)
- [Typical Workflow for Creating and Including an Adapter Connection in an Integration](#)

## SOAP Adapter Capabilities

The SOAP Adapter enables you to connect to any SOAP web service.

The SOAP Adapter enables you to expose an Integration Cloud Service integration as a SOAP web service and to invoke an external SOAP web service. When creating a connection with the SOAP Adapter, you can either upload the WSDL file (using the **Upload** button) or provide a URL to the WSDL file. When you invoke the wizard to create a connection, the contents of the specified WSDL file are read and the port type, operation, and service to use are displayed. If your WSDL includes only a single service, port type, and operation, they are automatically selected. If the WSDL includes multiple services, port types, and operations, you can select the ones to use in your integration.

The SOAP Adapter provides the following additional features:

- Transport Layer Security (TLS) version support of the target server. The TLS protocol provides privacy and data integrity between two communicating computer applications. For more information, see [Configuring Connection Properties](#).
- Version suppression of the timestamp in the WS-Security header. Suppression applies to the Username Password Token security policy in the invoke (outbound) direction. In secure Web Services transactions, a WS-Utility (WSU) timestamp can be inserted into a WS-Security header to define the lifetime of the message in which it is placed. For more information, see [Configuring Connection Properties](#).
- Ability to specify if the timestamp is not required in the response message. For more information, see [Configuring Connection Properties](#).

- Use of 16.3.3 or later SOAP Adapter runtime functionality or 16.2.5 SOAP Adapter runtime functionality in an integration. You configure this option on the Basic Info page of the Adapter Endpoint Configuration Wizard. For more information, see [What You See on the Basic Info Page](#).
- Disabling SOAP action validation for inbound requests on the Operations page of the Adapter Endpoint Configuration Wizard. This is useful for environments in which your WSDL includes custom code and you want to bypass validation. For more information, see [What You See on the Oracle SOAP Adapter Trigger Operations Page](#).
- Asynchronous callback response support in the invoke (outbound) direction. This feature is supported if your WSDL defines both a request and callback response port type with one-way operations. The callback response endpoint must be specified through a different integration flow. The endpoint must be built using the SOAP Adapter and secured with the username password token security policy.

For example, the WSDL includes a port type with **Callback** or **Response** in the name (such as **portType name="EchoAsyncCallback"** or **portType name = "EchoAsyncResponse"**) and an operation with **Response** in the name (such as **operation name="processResponse"**). You must also set **Preview updated SOAP adapter runtime** to **Yes** on the Basic Info page of the Adapter Endpoint Configuration Wizard.

Based on the operation selection, if it is a one-way operation, you are asked to select the expected response type (no response or delayed response) on the Callback Operation page of the Adapter Endpoint Configuration Wizard.

- No Response: One-way invocation.
- Delayed Response: Specify the callback port type, operation, callback flow identifier, and version.

The callback flow identifier and version are used to determine the callback endpoint and sent in the ReplyTo header while sending a request to the outbound endpoint.

- Support for adding standard and custom SOAP and HTTP headers to outbound and inbound requests and handling the responses with headers to propagate back to the user. This configuration enables header configuration for the inbound service and header propagation for the outbound service. WS-Addressing headers propagation is not supported (for example, MessageId, ReplyTo, FaultTo, and so on). All header information and body elements are encapsulated under a single element so the mapper can display request and response information. To use this feature, you must set **Preview updated SOAP adapter runtime** to **Yes** on the Basic Info page. For more information, see [Adding the SOAP Adapter Connection to an Integration](#).
- Support for multiple part messages in document-style WSDLs. The support is provided for both inbound and outbound adapter configurations.

Standard SOAP headers can be defined in a WSDL in two ways:

- Implicit headers:

With this type, the request header and body part are in different message types. In the binding section of the WSDL, the header uses the part name within the message type and message type name. The body does not have any part names explicitly defined in it.



```

<wsdl:message name="CreateUserRequestHeader">
<wsdl:part name="requestHeader" element="tns:UserCreate"/>
</wsdl:message>
<wsdl:message name="CreateUserRequest">
<wsdl:part element="tns:UserCreateHeader" name="parameters"/>
</wsdl:message>
<wsdl:binding name="UserBinding" type="tns:UserEndPoint">
<soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/
http" />
<wsdl:operation name="CreateUser">
<soap:operation soapAction="http://example.com/CreateUser" />
<wsdl:input> <soap:body use="literal" />
<soap:header use="literal" part="requestHeader"
message="tns:CreateUserRequestHeader"/>
</wsdl:input>
<wsdl:output>
<soap:body use="literal" />
</wsdl:output>
</wsdl:operation>
</wsdl:binding>

```

– Explicit headers:

With this type, there are multiple parts in a single message type in the WSDL: one for the header and one for the body payload. The header is specified by its part name. The body uses its own name.

```

<wsdl:message name="CreateUserRequest">
<wsdl:part element="tns:UserCreateHeader" name="parameters"/>
<wsdl:part name="requestHeader" element="tns:UserCreate"/>
</wsdl:message>
<wsdl:binding name="UserBinding" type="tns:UserEndPoint">
<soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/
http" />
<wsdl:operation name="CreateUser">
<soap:operation soapAction="http://example.com/CreateUser" />
<wsdl:input> <soap:body use="literal" />
<soap:header use="literal" part="requestHeader"
message="tns:CreateUserRequest"/>
</wsdl:input>
<wsdl:output>
<soap:body use="literal" />
</wsdl:output>
</wsdl:operation>
</wsdl:binding>

```

To use this feature, you must set **Preview updated SOAP adapter runtime to Yes** on the Basic Info page.

---

**Note:** Without specifying a header, multiple parts in a document-style WSDL are not supported.

---

When you invoke the Adapter Endpoint Configuration to configure the SOAP Adapter as a trigger or invoke, the Operations page detects that the WSDL includes defined SOAP request and/or response headers and automatically enables the button to configure SOAP headers for the endpoint. You can select **No** to remove the headers for the endpoint. You cannot modify these headers. The subsequent Request Header and Response Header pages of the WSDL load and show the

specific headers defined in the WSDL. For more information, see [Adding the SOAP Adapter Connection to an Integration](#).

For more information, see [Configuring SOAP Adapter Invoke Callback Operation Properties](#).

## What Application Version Does the SOAP Adapter Support?

There is no specific application version for SOAP Adapter compatibility as long as the WSDL can be parsed.

## About Oracle Integration Cloud Service

Oracle Integration Cloud Service is a complete, secure, but lightweight integration solution that enables you to connect your applications in the cloud. It simplifies connectivity between your applications and connects both your applications that live in the cloud and your applications that still live on premises. Oracle Integration Cloud Service provides secure, enterprise-grade connectivity regardless of the applications you are connecting or where they reside.

Oracle Integration Cloud Service provides native connectivity to Oracle Software as a Service (SaaS) applications, such as Oracle Sales Cloud, Oracle RightNow Cloud, and so on. Oracle Integration Cloud Service *adapters* simplify connectivity by handling the underlying complexities of connecting to applications using industry-wide best practices. You only need to create a *connection* that provides minimal connectivity information for each system. Oracle Integration Cloud Service *lookups* map the different codes or terms used by the applications you are integrating to describe similar items (such as country or gender codes). Finally, the visual data mapper enables you to quickly create direct mappings between the trigger and invoke data structures. From the mapper, you can also access lookup tables and use standard XPath functions to map data between your applications.

Once you integrate your applications and activate the integrations to the runtime environment, the dashboard displays information about the running integrations so you can monitor the status and processing statistics for each integration. The dashboard measures and tracks the performance of your transactions by capturing and reporting key information, such as throughput, the number of messages processed successfully, and the number of messages that failed processing. You can also manage business identifiers that track fields in messages and manage errors by integrations, connections, or specific integration instances.

## About Oracle Integration Cloud Service Connections

Connections define information about the instances of each configuration you are integrating. Oracle Integration Cloud Service includes a set of predefined *adapters*, which are the types of applications on which you can base your connections, such as Oracle Sales Cloud, Oracle Eloqua Cloud, Oracle RightNow Cloud, and others. A connection is based on an adapter. A connection includes the additional information required by the adapter to communicate with a specific instance of an application (this can be referred to as metadata or as connection details). For example, to create a connection to a specific RightNow Cloud application instance, you must select the Oracle RightNow adapter and then specify the WSDL URL, security policy, and security credentials to connect to it.



[Video](#)

## About Oracle Integration Cloud Service Integrations

Integrations are the main ingredient of Oracle Integration Cloud Service. An integration includes at the least a trigger (source) connection (for requests sent to Oracle Integration Cloud Service) and invoke (target) connection (for requests sent from Oracle Integration Cloud Service to the target) and the field mapping between those two connections.

When you create your integrations, you build on the [connections](#) you already created by defining how to process the data for the trigger (source) and invoke (target) connections. This can include defining the type of operations to perform on the data, the business objects and fields against which to perform those operations, required schemas, and so on. To make this easier, the most complex configuration tasks are handled by Oracle Integration Cloud Service. Once your trigger (source) and invoke (target) connections are configured, the mappers between the two are enabled so you can define how the information is transferred between the trigger (source) and invoke (target) data structures for both the request and response messages.



[Video](#)

## Typical Workflow for Creating and Including an Adapter Connection in an Integration

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

Step	Description	More Information
1	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="#">Creating a SOAP Adapter Connection</a>
2	Create the integration. When you do this, you add trigger and invoke connections to the integration.	<a href="#">Creating an Integration and Adding the SOAP Adapter Connection to an Integration</a>
3	Map data between the trigger connection data structure and the invoke connection data structure.	<a href="#">Mapping Integration Cloud Service Data of Using Oracle Integration Cloud Service</a>
4	(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).	<a href="#">Creating Lookups of Using Oracle Integration Cloud Service</a>
5	Activate the integration.	<a href="#">Managing Integrations of Using Oracle Integration Cloud Service</a>
6	Monitor the integration on the dashboard.	<a href="#">Monitoring Integration Cloud Services of Using Oracle Integration Cloud Service</a>

Step	Description	More Information
7	Track payload fields in messages during runtime.	Assigning Business Identifiers for Tracking Fields in Messages and Managing Business Identifiers for Tracking Fields in Messages of <i>Using Oracle Integration Cloud Service</i>
8	Manage errors at the integration level, connection level, or specific integration instance level.	Managing Errors of <i>Using Oracle Integration Cloud Service</i>

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## Creating a SOAP 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](#)
- [Uploading an SSL Certificate](#)
- [Creating a Connection](#)
- [Editing a Connection](#)
- [Cloning a Connection](#)
- [Deleting a Connection](#)

### Prerequisites for Creating a Connection

Ensure that the WSDL to use is reachable. There is no restriction on the type of WSDL to use.

### Uploading an SSL Certificate

Certificates are used to validate outbound SSL connections. If you make an SSL connection in which the root certificate does not exist in Oracle Integration Cloud Service, an exception is thrown. In that case, you must upload the appropriate certificate. A certificate enables Oracle Integration Cloud Service to connect with external services. If the external endpoint requires a specific certificate, request the certificate and then upload it into Oracle Integration Cloud Service.

To upload a certificate:

1. From the Oracle Integration Cloud Service home page, click the **Administration** tab in the upper right corner.

All certificates currently uploaded to the trust store are displayed in the Certificates dialog. The **Filter By > Type** list displays the following details:

- **Preinstalled:** Displays the certificates automatically installed in Oracle Integration Cloud Service. These certificates cannot be deleted.
- **Uploaded:** Displays the certificates uploaded by individual users. These certificates can be deleted and updated.

You can also search for certificates in the **Search** field. The search results are limited to a maximum of ten records sorted by name for performance and usability

reasons. To ensure that your search results are more granular, enter as much of the certificate name as possible.

2. Click **Upload** at the top of the page.
3. In the Upload Certificate dialog box, enter a unique identifier for the certificate.

This is a name you can use to identify the certificate.

4. Click **Browse** to locate the certificate file (.cer).
5. Click **Upload**.
6. Click the certificate name to view details such as the subject of the certificate, the issuer of the certificate, the date the certificate was issued, and the date the certificate expires.

## Creating a Connection

The first step in creating an integration is to create the connections to the applications with which you want to share data.

1. In the Integration Cloud Service toolbar, click **Designer**.
2. On the Designer Portal, click **Connections**.
3. Click **New Connection**.

The Create Connection — Select Adapter dialog is displayed.

4. Select an adapter from the dialog. You can also search for the type of adapter to use by entering a partial or full name in the Search field, and clicking **Search**.

The New Connection — Information dialog is displayed.

5. Enter the information to describe the connection.
  - 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, do not include a blank space (for example, OSC Inbound).
  - Select the role (direction) in which to use this connection (trigger, invoke, or both). Only the roles supported by this 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, then try to drag the adapter into the section you did not select, you receive an error (for example, configure an Oracle RightNow Cloud Adapter as only an invoke, but drag the adapter to the trigger section).
  - Enter an optional description of the connection.

6. Click **Create**.

Your connection is created and you are now ready to configure connection details, such as email contact, connection properties, security policies, and connection login credentials.

## Adding a Contact Email

From the Connection Administrator section of the connection, you can add a contact email address for notifications.

1. In the **Email Address** field, enter an email address to receive email notifications when problems occur.
2. In the upper right corner, click **Save**.

## Configuring Connection Properties

Enter connection information so your application can process requests.

1. Click **Configure Connectivity**.

The Connection Properties dialog is displayed.

2. In the **WSDL URL** field, specify the URL in either of two ways:
  - a. Click the **Upload File** checkbox, then click **Upload** to upload the WSDL.
  - b. Manually specify the WSDL to use.
3. In the **Target Server's TLS version (Optional)** field, optionally specify the Transport Layer Security (TLS) version of the target server. Oracle Integration Cloud Service is configured to use TLS v1.1 by default.
  - TLSv1
  - TLSv1.1

- TLSv1.2

The TLS protocol provides privacy and data integrity between two communicating computer applications. Depending on the JDK version in use, the version of TLS being used during connection establishment can differ for different clients and servers. If the outbound server requires a different TLS version, specify the required version to use.

4. In the **Suppress insertion of timestamp into the request (Optional)** field, optionally suppress the timestamp in the WS-Security header. Suppression applies to the Username Password Token security policy in the invoke (outbound) direction. In secure Web Services transactions, a WS-Utility (WSU) timestamp can be inserted into a WS-Security header to define the lifetime of the message in which it is placed.
  - **Yes:** No timestamp is added to the WS-Security header sent as part of the outbound request. For inbound requests with the basic authentication security policy, no timestamp is required to be sent by the client.
  - **No:** Clients are expected to send a timestamp in the WS-Security header with the request.
5. In the **Ignore timestamp in the response message (Optional)** field, specify if the timestamp is not required in the response message.
  - **Yes:** The timestamp is not required in the response message. If the timestamp is present in the SOAP security header when the response is received from the service, it is ignored.
  - **No:** The timestamp is received in the response from the service is not ignored.
6. Click **OK**.
7. Configure connection security.

## Configuring Connection Security

Configure security for your Update Adapter Product Name connection by selecting the security policy.

1. Click **Configure Credentials**.
2. Select the security policy.

The page is refreshed to display the login credential fields.

3. Specify the login credentials. For trigger (inbound) connections, the security policy must be either username password token or basic authentication. This is because all Oracle Integration Cloud Service inbound endpoints are protected with either of these policies. If **Preview updated SOAP adapter runtime** is enabled, the SOAP Adapter response payload does not contain the timestamp in the WSEE headers.



Security Policy	Fields
<b>Username Password Token</b> (In the trigger (inbound) direction, supports oracle/wss_username_token_over_ssl_service_policy.)	<ul style="list-style-type: none"> <li>• <b>Username</b> — Enter the name of a user</li> <li>• <b>Password</b> — Enter the password.</li> <li>• <b>Confirm Password</b> — Reenter the password.</li> </ul>
<b>Basic Authentication</b> (In the trigger (inbound) direction, supports HTTP basic authentication over SSL: oracle/wss_http_token_over_ssl_service_policy). Note the following behavior: <ul style="list-style-type: none"> <li>• If the invoking client is secured with Oracle Web Services Manager (OWSM) using an oracle/wss* policy, the client receives a failure.</li> <li>• In the inbound (trigger) direction, if the <b>Suppress insertion of timestamp into the request (Optional)</b> field is enabled, then oracle/http_basic_auth_over_ssl_service_policy is supported.</li> </ul> If Basic Authentication is required for both trigger and invoke connections, create one connection with the <b>Trigger and Invoke</b> role that uses the Basic Authentication security policy.	<ul style="list-style-type: none"> <li>• <b>Username</b> — Enter the name of a user who has access to the destination web service.</li> <li>• <b>Password</b> — Enter the password.</li> <li>• <b>Confirm Password</b> — Reenter the password.</li> </ul>
<b>No Security Policy</b>	No fields are displayed.

If you select a security policy, and then select **Yes** for **Preview updated SOAP adapter runtime** to use the JCA transport protocol on the Basic Info page, the following behavior occurs.

If the Inbound SOAP Connection is Configured with Security Policy...	Then...
Username Password Token	<ul style="list-style-type: none"> <li>• The client should send the username/password and timestamp as part of the WSEE header.</li> <li>• The response includes only the SOAP payload.</li> </ul>

If the Inbound SOAP Connection is Configured with Security Policy...	Then...
Basic Authentication	<ul style="list-style-type: none"> <li>• The client should send the username/ password in the HTTP headers and timestamp as part of the WSEE header.</li> <li>• The response includes only the SOAP payload.</li> </ul>
Basic Authentication and the <b>Suppress insertion of timestamp into the request (Optional)</b> field is enabled	<ul style="list-style-type: none"> <li>• The client should send the username/ password in the HTTP headers.</li> <li>• The response includes only the SOAP payload.</li> </ul>

---

**Note:** If no timestamp is included as part of the header, configure the SOAP Adapter connection with the Basic Authentication security policy (oracle/http\_basic\_auth\_over\_ssl\_client\_policy) and set **Suppress insertion of timestamp into the request (Optional)** to Yes.

---

4. Click **OK**.

## Configuring an Agent Group

Configure an agent group for accessing your on-premises application.

1. Click **Configure Agents**.

The Select an Agent Group page appears.

2. Click the name of the agent group.
3. Click **Use**.
4. Test the connection. See [Testing the Connection](#).

### Related Topics:

About Agents and Integrations Between On-Premises Applications and Oracle Integration Cloud Service

Managing Agent Groups and the On-Premises Agent

Monitoring Agents

## Testing the Connection

Test your connection to ensure that it is successfully configured.

1. In the upper right corner of the page, click **Test**.

If successful, the following message is displayed and the progress indicator shows 100%.

The connection test was successful!

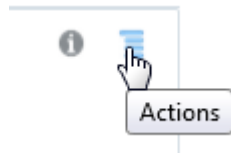
2. If your connection was unsuccessful, an error message is displayed with details. Verify that the configuration details you entered are correct.

3. When complete, click **Save**.

## Editing a Connection

You can edit connection settings after creating a new connection.

1. In the Oracle Integration Cloud Service toolbar, click **Designer**.
2. On the Designer Portal, click **Connections**.
3. On the Connections page, search for the connection name.
4. Select **Edit** from the connection **Actions** menu or click the connection name.



The Connection page is displayed.

5. To edit the notification email contact, change the email address in the **Email Address** field.
6. To edit the connection properties, click **Configure Connectivity**. Note that some connections do not include this button. If your connector does not include a **Configure Connectivity** button, then click the **Configure Credentials** button.

## Cloning a Connection

You can clone a copy of an existing connection. It is a quick way to create a new connection.

1. In the Oracle Integration Cloud Service toolbar, click **Designer**.
2. On the Designer Portal, click **Connections**.
3. On the Connections page, search for the connection name.
4. Select **Clone** from the connection **Actions** menu.



The Clone Connection dialog is displayed.

5. Enter the connection information.
6. Click **Clone**.
7. Click **Edit** to configure the credentials of your cloned connection. Cloning a connection does not copy the credentials.

See [Editing a Connection](#) for instructions.

## Deleting a Connection

You can delete a connection from the connection menu.

1. In the Oracle Integration Cloud Service toolbar, click **Designer**.
2. On the Designer Portal, click **Connections**.
3. On the Connections page, search for the connection name.
4. Click **Delete** from the connection **Actions** menu.



The Delete Connection dialog is displayed if the connection is not used in an integration.

5. Click **Yes** to confirm deletion.

---

## Creating an Integration

Integrations use the adapter connections you created to your applications, and define how information is shared between those applications. You can create, import, modify, or delete integrations; create integrations to publish or subscribe to messages; add and remove request and response enrichment triggers; and create routing paths for different invoke endpoints in integrations. Click the following topics for more information.

### Topic

- [Creating Integrations \(in \*Using Oracle Integration Cloud Service\*\)](#)

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# Adding the SOAP Adapter Connection to an Integration

When you drag the SOAP Adapter into the trigger and invoke areas of an integration, the Cloud Endpoint Configuration Wizard is invoked. This wizard guides you through configuration of the SOAP Adapter endpoint properties.

The following sections describe the wizard pages that guide you through configuration of the SOAP Adapter as a trigger or invoke in an integration.

## Topics

- [Configuring Basic Information Properties](#)
- [Configuring SOAP Adapter Trigger Operation Properties](#)
- [Configuring SOAP Adapter Invoke Operation Properties](#)
- [Configuring SOAP Adapter Request Header Properties](#)
- [Configuring SOAP Adapter Response Header Properties](#)
- [Reviewing Configuration Values on the Summary Page](#)

For more information about the SOAP Adapter, see [SOAP Adapter Capabilities](#).

## Configuring Basic Information Properties

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

## Topics

- [What You Can Do from the Basic Info Page](#)
- [What You See on the Basic Info Page](#)

## What You Can Do from the Basic Info Page

You can specify the following values on the Basic Info page. The Basic Info page is the initial wizard page that is displayed whenever you drag an adapter to the section of the integration canvas supported by your adapter.

- Specify a meaningful name.
- Specify a description of the responsibilities.
- Select the underlying transport mechanism to use.

## What You See on the Basic Info Page

The following table describes the key information on the Basic Info page.

Element	Description
What do you want to call your endpoint?	<p>Provide a meaningful name so that others can understand the responsibilities of this connection. You can include English alphabetic characters, numbers, underscores, and dashes in the name. You cannot include the following:</p> <ul style="list-style-type: none"><li>• Blank spaces (for example, My Inbound Connection)</li><li>• Special characters (for example, #;83&amp; or righ(t)now4)</li><li>• Multibyte characters</li></ul>
What does this endpoint do?	<p>Enter an optional description of the connection's responsibilities. For example: This connection receives an inbound request to synchronize account information with the cloud application.</p>

If you are configuring the SOAP Adapter, there is an additional property. Starting with release 16.3.3, the underlying infrastructure for the SOAP Adapter runtime facilitates the delivery of new features in 16.3.3 and releases going forward. This change in infrastructure can cause backwards incompatibility under very exceptional situations for existing integrations using the SOAP Adapter. To preserve the backward compatibility of existing integrations, the newer runtime must be selected. Existing integrations using the SOAP adapter continue to use the 16.2.5 SOAP Adapter runtime and there are no differences in behavior.

Users modifying existing integrations to uptake the new runtime must take extra measures to check whether the integrations work the same as they were prior to uptaking the new runtime. In case of differences in behavior, you can select either not to uptake the new runtime for the existing flows or make necessary adjustments to the client application calling integrations or the SOAP API that is called by the ICS flow (depending upon how the SOAP adapter is used in the ICS flow)

New integrations built using 16.3.3 or above use the updated SOAP Adapter runtime by default. You can also choose to disable that functionality in case pre-16.3.3 behavior is wanted for new integrations.



Element	Description
Preview updated SOAP adapter runtime	<p>You can uptake the new 16.3.3 or later functionality exposed by the SOAP Adapter.</p> <ul style="list-style-type: none"> <li>• <b>Yes:</b> Provides the following functionality. The underlying transport mechanism used is the cloud SDK-based JCA transport. <ul style="list-style-type: none"> <li>– Support for specifying the TLS version for a specific external SOAP API. The pre-16.3.3 SOAP Adapter runtime assumes all external SOAP APIs are protected using TLS version 1. The new capability allows support for invocation of SOAP APIs hosted on different versions: TLS version 1, TLS version 1.1, and TLS version 1.2.</li> <li>– Support for suppressing timestamps in SOAP documents sent to external SOAP APIs protected using username password token security policy. Some external SOAP services secured using the username password token security policy cannot handle the timestamps included in the SOAP/HTTP header. In that scenario, you can use this feature to enable the suppression of the timestamp in the outgoing SOAP documents.</li> <li>– Support for ignoring the absence of timestamps in the response SOAP document sent by the external SOAP APIs. Some external SOAP services secured using the username password token security policy do not have the ability to include timestamps in the SOAP HTTP header of the response SOAP messages to be sent back to the calling applications. In that scenario, you can use this feature to enable Oracle Integration Cloud Service to ignore the absence of the timestamp in the outgoing SOAP documents.</li> <li>– Support for disabling the validation of the SOAP action.</li> <li>– Support for adding SOAP and HTTP headers to outbound and inbound requests and handling the responses with headers to propagate back to the user.</li> <li>– Support for multiple part messages in document-style WSDLs.</li> </ul> </li> </ul>

Element	Description
	<ul style="list-style-type: none"><li>• <b>No:</b> Uses 16.2.5 functionality. The underlying transport mechanism used is the Oracle Service Bus-based HTTP transport.</li></ul>
	<hr/> <b>Note:</b> If you import a pre-16.3.3 integration into Oracle Integration Cloud Service 16.3.3 or later that includes the SOAP Adapter, you must open the adapter in edit mode and explicitly select <b>Yes</b> to uptake the new 16.3.3 functionality. <hr/>

## Configuring SOAP Adapter Trigger Operation Properties

Enter the port type and operation for the SOAP Adapter.

### Topics

- [What You Can Do from the Oracle SOAP Adapter Trigger Operations Page](#)
- [What You See on the Oracle SOAP Adapter Trigger Operations Page](#)

### What You Can Do from the Oracle SOAP Adapter Trigger Operations Page

You can configure the following trigger operations for the Oracle SOAP Adapter. If your WSDL includes only a single service, port type, and operation, they are automatically selected. If the WSDL includes multiple services and port types, then select the ones to use in your integration.

- Select the port type
- Select the operation
- Select the types of request and response headers to configure (if your WSDL contains headers)

Based on the selected values, other objects such as the request object, response object, and fault object may also be automatically displayed.

## What You See on the Oracle SOAP Adapter Trigger Operations Page

The following table describes the key information on the Oracle SOAP Adapter trigger Operations page.

Element	Description
<b>Selected Port Type</b>	Displays the selected port type. If your WSDL includes multiple port types, select the port type.
<b>Selected Operation</b>	Displays the selected operation. If your WSDL includes multiple operations, select the operation.
<b>Request Object</b>	Displays the request object (if your WSDL includes request objects).
<b>Response Object</b>	Displays the response object (if your WSDL includes response objects).
<b>Disable SoapAction validation</b>	Select <b>Yes</b> to disable SOAP action validation for inbound requests. This is useful for environments in which your WSDL includes custom code and you want to bypass validation. When set to <b>No</b> (the default), Oracle Integration Cloud Service validates the SOAP action to ensure that it matches the WSDL.
<b>Do you want to configure headers for this endpoint?</b>	Select <b>Yes</b> to configure headers for the endpoint.  If the configured connection endpoint already includes defined SOAP headers, the header configuration is preselected as <b>Yes</b> . The header options include predefined, standard SOAP headers that cannot be modified.

Element	Description
What types of headers do you want to configure?	<p>Select the types of headers to configure. You then provide specific details about these headers on later pages of this wizard.</p> <ul style="list-style-type: none"><li>• <b>Request Headers:</b> Select to include standard HTTP, custom HTTP, and custom SOAP headers. Standard SOAP headers are automatically included if <b>Do you want to configure headers for this endpoint?</b> is selected as <b>Yes</b> and the WSDL used for the connection already has headers defined in it.</li><li>• <b>Response Headers:</b> Select to include standard HTTP, custom HTTP, and custom SOAP headers. Standard SOAP headers are automatically included if <b>Do you want to configure headers for this endpoint?</b> is selected as <b>Yes</b> and the WSDL used for the connection already has headers defined in it.</li></ul>

## Configuring SOAP Adapter Invoke Operation Properties

Enter the port, operation, and service for the SOAP Adapter.

### Topics

- [What You Can Do from the SOAP Adapter Invoke Operations Page](#)
- [What You See on the SOAP Adapter Invoke Operations Page](#)

## What You Can Do from the SOAP Adapter Invoke Operations Page

You can configure the following invoke operations for the SOAP Adapter. If the WSDL file you specified during SOAP Adapter connectivity configuration includes only a single service, port type, or operation, they are automatically selected for use. If the WSDL included multiple services, port types, or operations, then select the ones to use in this integration.

- Select the service.
- Select the port.
- Select the operation.

Based on the selected values, other objects such as the request object, response object, and fault object may also be automatically displayed.

## What You See on the SOAP Adapter Invoke Operations Page

The following table describes the key information on the SOAP Adapter invoke Operations page.

Element	Description
Selected Port Type	Displays the selected port type. If your WSDL includes multiple port types, select the port type.
Selected Operation	Displays the selected operation. If your WSDL includes multiple operations, select the operation.
Request Object	Displays the request object (if your WSDL includes request objects).
Response Object	Displays the response object (if your WSDL includes response objects).
Disable SoapAction validation	Select <b>Yes</b> to disable SOAP action validation for inbound requests. This is useful for environments in which your WSDL includes custom code and you want to bypass validation. When set to <b>No</b> (the default), Oracle Integration Cloud Service validates the SOAP action to ensure that it matches the WSDL.
Do you want to configure headers for this endpoint?	<p>Select <b>Yes</b> to configure headers for the endpoint.</p> <p>If the configured connection endpoint already includes defined SOAP headers, the header configuration is preselected as <b>Yes</b>. The header options include predefined, standard SOAP headers that cannot be modified.</p>
What types of headers do you want to configure?	<p>Select the types of headers to configure. You then provide specific details about these headers on later pages of this wizard.</p> <ul style="list-style-type: none"> <li>• <b>Request Headers:</b> Select to include standard HTTP, custom HTTP, and custom SOAP headers. Standard SOAP headers are automatically included if <b>Do you want to configure headers for this endpoint?</b> is selected as <b>Yes</b> and the WSDL used for the connection already has headers defined in it.</li> <li>• <b>Response Headers:</b> Select to include standard HTTP, custom HTTP, and custom SOAP headers. Standard SOAP headers are automatically included if <b>Do you want to configure headers for this endpoint?</b> is selected as <b>Yes</b> and the WSDL used for the connection already has headers defined in it.</li> </ul>

## Configuring SOAP Adapter Request Header Properties

Enter the request header details for the SOAP Adapter.

### Topics

- [What You Can Do from the SOAP Adapter Request Header Page](#)
- [What You See on the SOAP Adapter Request Header Page](#)

### What You Can Do from the SOAP Adapter Request Header Page

You can configure and view SOAP, standard HTTP, custom HTTP, and custom SOAP request header parameters for the SOAP Adapter.

### What You See on the SOAP Adapter Request Header Page

The following table describes the key information on the Oracle SOAP Adapter Request Header page. The headers you specify are applied to the selected operation and request object. The selected elements and values are included under an element in the integration WSDL and are displayed in the mapper as a request and response.

Element	Description
SOAP Headers	View the SOAP headers contained in the WSDL. These headers cannot be modified.
Standard HTTP Headers	Click the <b>Add</b> icon to add headers from the prepopulated list. Some of the mandatory standard HTTP headers are disabled for selection because allowing them to change may provide unexpected results (for example, authorization). You can view SOAP headers and configure and view standard HTTP, custom HTTP, and custom SOAP request header parameters for the SOAP Adapter.
Custom HTTP Headers	Click the <b>Add</b> icon to add custom header names and descriptions.
Custom SOAP Headers	Click <b>Browse</b> to add a schema file from which to select custom SOAP headers configured in the connection endpoint WSDL. You can upload multiple XML schemas and select a header element from the uploaded schema. If multiple elements must be selected from a single schema, the same schema can be uploaded again to select the new header element.

## Configuring SOAP Adapter Response Header Properties

Enter the response header details for the SOAP Adapter.

## Topics

- [What You Can Do from the SOAP Adapter Response Header Page](#)
- [What You See on the SOAP Adapter Response Header Page](#)

## What You Can Do from the SOAP Adapter Response Header Page

You can configure and view SOAP, standard HTTP, custom HTTP, and custom SOAP response header parameters for the SOAP Adapter.

## What You See on the SOAP Adapter Response Header Page

The following table describes the key information on the Oracle SOAP Adapter Response Header page. The headers you specify are applied to the selected operation and response object. The selected elements and values are included under an element in the integration WSDL and are displayed in the mapper as a request and a response.

Element	Description
SOAP Headers	View the SOAP headers contained in the WSDL. These headers cannot be modified.
Standard HTTP Headers	Click the <b>Add</b> icon to add headers from the prepopulated list. Some of the mandatory standard HTTP headers are disabled for selection because allowing them to change may provide unexpected results (for example, authorization). You can view SOAP headers and configure and view standard HTTP, custom HTTP, and custom SOAP request header parameters for the SOAP Adapter.
Custom HTTP Headers	Click the <b>Add</b> icon to add custom header names and descriptions.
Custom SOAP Headers	Click <b>Browse</b> to add a schema file from which to select custom SOAP headers. You can upload multiple XML schemas and select a header element from the uploaded schema. If multiple elements must be selected from a single schema, the same schema can be uploaded again to select the new header element.

## Configuring SOAP Adapter Invoke Callback Operation Properties

Enter the callback response operation details for the SOAP Adapter.

## Topics

- [What You Can Do from the Oracle SOAP Adapter Invoke Callback Operation Page](#)
- [What You See on the Oracle SOAP Adapter Invoke Callback Operations Page](#)

## What You Can Do from the Oracle SOAP Adapter Invoke Callback Operation Page

You can configure and view the following callback response operation parameters for the Oracle SOAP Adapter. For this page in the Adapter Endpoint Configuration Wizard to be displayed, a check is made to see if your WSDL includes a port type with **Callback** or **Response** in the name (for example, **portType name="EchoAsyncCallback"** or **portType name="EchoAsyncResponse"**) and an operation with **Response** in the name (for example, **operation name="processResponse"**).

- Select the port type.
- View the callback response operation.
- Specify the integration flow and version number to which to send the callback response.

## What You See on the Oracle SOAP Adapter Invoke Callback Operations Page

The following table describes the key information on the Oracle SOAP Adapter invoke Callback Operation page.

Element	Description
No Response	Select if a no callback response is expected.
Delayed Response	Select if a delayed callback response is expected.
Select the Port Type	Select the port type to use for the asynchronous callback response.
Selected Callback Operation	View the callback operation associated with the selected port type. In the case of multiple operations, Select the operation.
Flow Identifier	Specify the name of the callback integration. (that is, to be used in the request integration). The identifier value must be the same as the callback integration flow identifier seen in Oracle Integration Cloud Service integrations.
Flow Version	Specify the version number of the callback integration. The version value must be the same as the callback integration flow version seen in Oracle Integration Cloud Service integrations.

## Reviewing Configuration Values on the Summary Page

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

### Topics

- [What You Can Do from the Summary Page](#)



- [What You See on the Summary Page](#)

## What You Can Do from the Summary Page

You can review configuration details from the Summary page. The Summary page is the final wizard page for each adapter after you have completed your configuration.

- View the configuration details you defined for the adapter. For example, if you have defined an inbound trigger (source) adapter with a request business object and immediate response business object, specific details about this configuration are displayed on the Summary page.
- Click **Done** if you want to save your configuration details.
- Click a specific tab in the left panel or click **Back** to access a specific page to update your configuration definitions.
- Click **Cancel** to cancel your configuration details.

## What You See on the Summary Page

The following table describes the key information on the Summary page.

Element	Description
Summary	<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>



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# Creating Mappings and Lookups in Integrations

You must map data between trigger connections and invoke connections in integrations. You can also optionally create lookups in integrations.

## Topics

- Mapping Integration Cloud Service Data (in *Using Oracle Integration Cloud Service*)
- Creating Lookups (in *Using Oracle Integration Cloud Service*)



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# Administering Integrations

Oracle Integration Cloud Service provides you with the information and tools required to activate, monitor, and manage your integrations in the runtime environment.

**Topic**

- Administering Integration Cloud Service (in *Using Oracle Integration Cloud Service*)

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