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Preface

Using the NetSuite Adapter describes how to configure the NetSuite Adapter as a connection in an integration in Oracle Integration Cloud Service.

Topics:

- Audience
- Related Resources
- Conventions

Audience

Using the NetSuite Adapter is intended for developers who want to use the Oracle NetSuite Cloud adapter in integrations in Oracle Integration Cloud Service.

Related Resources

For more information, see these Oracle resources:

Oracle Cloud

http://cloud.oracle.com

- Using Oracle Integration Cloud Service
- Using the Oracle Mapper
- Getting Started with Oracle Cloud
- Managing and Monitoring Oracle Cloud

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.

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

Getting Started with the NetSuite Adapter

Review the following conceptual topics to learn about the NetSuite 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

- NetSuite Adapter Capabilities
- What Application Version Does the NetSuite 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

NetSuite Adapter Capabilities

The NetSuite Adapter enables you to create an integration with a NetSuite application.

NetSuite is a SaaS-based application for business management. The NetSuite platform includes ERP, CRM, PSA, and e-commerce capabilities. To integrate users, NetSuite provides a platform called SuiteCloud that consists of cloud development tools and infrastructure. The SuiteTalk component of the SuiteCloud framework enables integration of NetSuite with other on-premises or cloud solutions.

While SuiteTalk provides the ability to access NetSuite data and business processes through an XML-based API, it requires skills such as Microsoft .NET or Java to build integrations with it. The NetSuite Adapter addresses these requirements by providing a no-coding approach for building integrations with NetSuite. This enables users who are not professional developers to build integrations with NetSuite.

The NetSuite Adapter provides the following features:

- Quickly and easily connect on-premises systems and applications with NetSuite.
- Rapidly integrate with both cloud applications and with existing on-premises business systems.
- Automate the process for discovering NetSuite's web service WSDLs based on the user account.
- Eliminate the need to work with complex polymorphic data objects by elevating NetSuite records and custom objects (records and fields) to strongly-typed objects.
- Display records based on NetSuite's categorization.

- Provide available contextual information about business objects and operations to the developer at design time.
- Provide secured invocation to NetSuite's web services by adhering to the rolebased permission structure enforced in NetSuite in a transparent fashion.
- Provide a standard adapter life cycle, controlled runtime environment, and monitoring capabilities.

What Application Version Does the NetSuite Adapter Support

The NetSuite Adapter is compatible with NetSuite Application release V2015_1_0.

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.

Wideo

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.

Wideo

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.	Creating a NetSuite Adapter Connection
2	Create the integration. When you do this, you add trigger and invoke connections to the integration.	Creating an Integration and Adding the NetSuite Adapter Connection to an Integration
3	Map data between the trigger connection data structure and the invoke connection data structure.	Mapping Integration Cloud Service Data of <i>Using Oracle Integration Cloud Service</i>
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).	Creating Lookups of Using Oracle Integration Cloud Service
5	Activate the integration.	Managing Integrations of <i>Using Oracle Integration Cloud Service</i>
6	Monitor the integration on the dashboard.	Monitoring Integration Cloud Services of <i>Using Oracle Integration Cloud Service</i>

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</i> <i>Integration Cloud Service</i>
8	Manage errors at the integration level, connection level, or specific integration instance level.	Managing Errors of Using Oracle Integration Cloud Service

Creating a NetSuite 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

You must satisfy the following prerequisite to create a connection with the NetSuite Adapter:

Register with NetSuite Cloud at http://www.netsuite.com. You then receive an
email with information that you use to create a connection on the Connections
page. For more information, see Configuring Connection Properties and
Configuring Connection Security.

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.

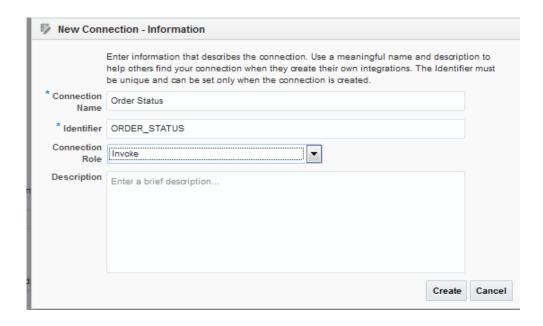
- 1. In the Integration Cloud Service toolbar, click **Designer**.
- **2.** On the Designer Portal, click **Connections**.
- 3. Click New Connection.

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.
 - 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 to use in this integration:

https://webservices.netsuite.com/wsdl/NetSuite_application_version/netsuite.wsdl

where NetSuite_application_version is the version of the NetSuite application. For example:

https://webservices.netsuite.com/wsdl/v2014_2_0/netsuite.wsdl

https://webservices.netsuite.com/wsdl/v2015_1_0/netsuite.wsdl

The web services may or may not be hosted at the above location. The adapter can programmatically determine the correct URL for the web services. NetSuite hosts customer accounts in multiple locations. For example:

- webservices.netsuite.com
- webservices.nal.netsuite.com
- 3. Click OK.
- **4.** Configure connection security.

Configuring Connection Security

Configure security for your NetSuite Adapter connection by selecting the security policy and providing the login credentails.

- 1. Click Configure Credentials.
- 2. Enter your login credentials:
 - **a.** Select the security policy. Only the NetSuite Authentication policy is supported. It cannot be deselected.
 - **b.** Enter the following information.
 - Email Address Enter the email address that serves as the user name.
 - Account Enter the account
 - Role Enter the role. Role-based access control ensures that users can only
 use data and application functionality that is related to their responsibilities.
 - Password Enter the password.
 - Confirm Password Reenter the password.
- 3. Click OK.

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*)

Adding the NetSuite Adapter Connection to an Integration

When you drag the NetSuite Adapter into the invoke area of an integration, the Adapter Endpoint Configuration Wizard is invoked. This wizard guides you through configuration of the NetSuite Adapter endpoint properties.

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

Topics

- Configuring Basic Information Properties
- Configuring NetSuite Adapter Invoke Operation Properties
- Reviewing Configuration Values on the Summary Page

For more information about the NetSuite Adapter, see NetSuite 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.

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?	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: • Blank spaces (for example, My Inbound Connection) • Special characters (for example, #;83& or righ(t)now4) • Multibyte characters
What does this endpoint do?	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.

Configuring NetSuite Adapter Invoke Operation Properties

Enter the NetSuite Adapter invoke operation values for your integration.

Topics

- What You Can Do from the NetSuite Adapter Invoke Operations Page
- What You See on the NetSuite Adapter Invoke Operations Page

What You Can Do from the NetSuite Adapter Invoke Operations Page

You can configure the following invoke operation values for the NetSuite Adapter.

- Select the operation to perform.
- Select the business object on which to perform the operation.

What You See on the NetSuite Adapter Invoke Operations Page

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

Element	Description
Select Processing Options	This feature is not currently available.

Element	Description	
Select Operation Type	 Select the type of operation to perform on the business object: Basic Add: Adds a record into the system. Delete: Deletes a record from the system. Get: Queries the system for a record. Update: Updates an existing record in the system. Miscellaneous Select a specific operation. If you select Miscellaneous, you do not need to select a business object (the Select Business Objects table is not visible). GetBudgetExchangeRate: Gets and filters data related to the budget exchange rate. GetConsolidatedExchangeRate: Gets and filters all data related to the consolidated exchange rate. GetCurrencyRate: Gets and filters the current currency rate. GetItemAvailability: Retrieves the inventory availability for a given list of items. GetPostingTransactionSummary: Retrieves a summary of the actual data in an account. 	
Filter by object name	Type the initial letters to filter the display of business objects.	
Select Business Objects	Select the business object to use.	
Your Selected Business Objects	Displays the selected business objects.	
Processing Options	 Select this link to enable and disable certain aspects of NetSuite cloud application server-side processing when performing an operation. Treat Warning As Error: If selected, the endpoint treats all warning messages that are displayed by the NetSuite cloud application as errors. Ignore Read Only Fields: If selected, the endpoint ignores read-only fields during any requests. Insert record on Update if not Exist: If selected, a record is inserted if one does not exist. This option is only displayed if the Update operation type is selected. 	

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	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 Back .

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)

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*)