Oracle® Cloud

Using the ServiceNow Adapter with Oracle Integration

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Contents

Preface

Audience v
Documentation Accessibility v
Related Resources v
Conventions vi

1 Understand the ServiceNow Adapter

ServiceNow Adapter Capabilities 1-1
- Supported ServiceNow Plugins 1-1

What Application Version Is Supported? 1-3
About ServiceNow Adapter Use Cases 1-3
Workflow to Create and Add an ServiceNow Adapter Connection to an Integration 1-3

2 Create a ServiceNow Adapter Connection

Prerequisites for Creating a Connection 2-1
Create a Connection 2-4
- Add a Contact Email 2-5
- Configure Connection Properties 2-6
- Configure Connection Security 2-6
- Test the Connection 2-6

3 Add the ServiceNow Adapter Connection to an Integration

Basic Info Page 3-1
Trigger Applications Page 3-2
Trigger Fields Page 3-2
Trigger Conditions Page 3-3
Trigger Response Page 3-3
Invoke Action Page 3-4
Invoke Operations Page 3-4
Invoke Extended Query Page 3-6

Summary Page 3-7

4 Post-Activation Steps

Invoke an Integration from ServiceNow 4-1
Configure Basic Authentication 4-1
Configure Username Password Policy 4-1

5 Troubleshoot the ServiceNow Adapter

Request from ServiceNow is Not Delivered to an Oracle Integration Instance 5-1
Retrieve Undelivered Messages When an Endpoint is Unavailable 5-2
Error While Refreshing the Metadata for the ServiceNow Adapter Connection 5-3

Preface

This guide describes how to configure the ServiceNow Adapter as a connection in an integration in Oracle Integration.

> **Note:**
>
> The information in this guide applies to all of your Oracle Integration instances. It doesn't matter which edition you're using, what features you have, or who manages your cloud environment. You'll find what you need here, including notes about any differences between the various flavors of Oracle Integration when necessary.

Topics

- Audience
- Documentation Accessibility
- Related Resources
- Conventions

Audience

This guide is intended for developers who want to use the ServiceNow Adapter in integrations in Oracle Integration.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at `http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc`.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit `http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info` or visit `http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs` if you are hearing impaired.

Related Resources

See these Oracle resources:

- Oracle Cloud

  `http://cloud.oracle.com`
- *Using Integrations in Oracle Integration*
- *Using the Oracle Mapper with Oracle Integration*

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 ServiceNow Adapter

Review the following conceptual topics to learn about the ServiceNow 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:

- ServiceNow Adapter Capabilities
- What Application Version Is Supported?
- About ServiceNow Adapter Use Cases
- Workflow to Create and Add an ServiceNow Adapter Connection to an Integration

ServiceNow Adapter Capabilities

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

ServiceNow provides platform-as-a-service (PaaS) enterprise service management software for human resources, law, facilities management, finance, marketing, and field operations. ServiceNow specializes in IT service management (ITSM) applications and automates common business processes. ServiceNow contains a number of modular applications that can vary by instance and user.

The ServiceNow Adapter is one of many predefined adapters included with Oracle Integration. You can configure the ServiceNow Adapter as an invoke connection in an integration in Oracle Integration.

Supported ServiceNow Plugins

Plugins are software components that provide specific features within a ServiceNow instance. The ServiceNow Adapter supports the following plugins.

Plugin	Description
`com.snc.asset_management`	Enables you to manage all your assets, consumables, and software licenses.
`com.snc.change_request`	Helps companies perceive and work to reduce risks of changes to the IT environment.
`com.snc.cmdb`	Provides core functionality for the configuration management database, inclusive of enterprise hardware and configuration item relationships.
`com.snc.incident`	Restores normal service operations as quickly as possible following an incident, while minimizing the impact to business operations and ensuring that quality is maintained.

Plugin	Description
com.snc.service	Provides Information Technology Infrastructure Library (ITIL) services.
com.snc.model	Enables you to manage and maintain model categories, models, suites, and bundled models.
com.snc.problem	Helps to identify the cause of an error in the IT infrastructure that is usually reported as occurrences of related incidents.
com.snc.product_catalog	Provides information about individual models. Models are specific versions or various configurations of an asset. Models published to the product catalog are automatically published to the service catalog.
com.snc.sla	Provides a greatly enhanced version of the default service level agreement (SLA) engine.
com.snc.expense_line	Enables cost tracking. This plugin is integrated with asset management, configuration management database (CMDB), cost management, and contract management.
com.snc.contract_management	Provides the ability to manage all types of contracts.
com.snc.release_management	Encompasses the planning, designing, building, configuring, and testing of hardware and software releases to create a defined set of release components.
com.glideapp.knowledge	Enables you to gather, store, and share knowledge within your enterprise.
com.snc.cs_base	Enables you to route cases to available customer service agents with the necessary skill sets.
com.sn_shn	Activates the special handling notes application, which enables you to quickly view brief messages about records.
com.glideapp.servicecatalog	Allows you to order predefined and bundled goods and services from your IT organization or other departments.
com.snc.service_desk_call	Part of the service desk application that enables service desk staff to collect information in a call that does not relate to a specific process. The call is transferred to an incident, problem, change request, or service catalog request. Replaces the best practices: the new ticket module and the New Call Wizard plugin.
com.snc.sla	Provides the core SLA functionality. SLA definitions provide conditions to start, pause, stop, cancel, and reset task SLAs against any task type. In addition, you can specify a schedule on the definition to define the working hours and also a workflow to run against each task SLA that is typically used to generate notifications.

Plugin	Description
com.snc.iam	Allows crisis managers to manage communications for major issues, bringing together all involved users to help resolve these issues quickly.
com.snc.procurement	Allows you to create purchase orders and obtain items for fulfilling service catalog requests.
com.snc.on_call_rotation	Provides the ability to create on-call schedules and escalation trees. When an incident is created, the escalation is dynamically routed to an on-call resource. On-call enables you to configure and build different on-call schedules per process and assignment group. When utilizing the notify plugin, resources can use short messaging service (SMS) and voice escalations to interact with the escalation to acknowledge incidents, and so on.
com.snc.service_portfolio	Enables an organization to document the business services it provides using a standardized, structured format. Performance against availability commitments is calculated and can be displayed in a home page.
com.snc.vendor_performance	Provides capabilities to measure, manage, and track vendor data and compare performance characteristics in unique graphical views.
apps/system_user	Enables you to register a new user/roles/ group/department/ company.

What Application Version Is Supported?

For information about which application version is supported by this adapter, see the Connectivity Certification Matrix:

See Connectivity Certification Matrix.

About ServiceNow Adapter Use Cases

The ServiceNow Adapter can be used in a variety of scenarios.

For example, you can create an integration in which a trigger Salesforce Adapter connection is integrated with an invoke ServiceNow Adapter connection, which creates an incident in ServiceNow whenever a new case is created in Salesforce.

Workflow to Create and Add an ServiceNow 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.

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.	Create a ServiceNow Adapter Connection
2	Create the integration. When you do this, you add trigger and invoke connections to the integration.	Create Integrations and Add the ServiceNow Adapter Connection to an Integration
3	Map data between the trigger connection data structure and the invoke connection data structure.	Map Data of *Using Integrations in Oracle Integration*
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).	Manage Lookups of *Using Integrations in Oracle Integration*
5	Activate the integration.	Manage Integrations of *Using Integrations in Oracle Integration*
6	Monitor the integration on the dashboard.	Monitor Integrations of *Using Integrations in Oracle Integration*
7	Track payload fields in messages during runtime.	Assign Business Identifiers for Tracking Fields in Messages and Manage Business Identifiers for Tracking Fields in Messages of *Using Integrations in Oracle Integration*
8	Manage errors at the integration level, connection level, or specific integration instance level.	Manage Errors of *Using Integrations in Oracle Integration*

2

Create a ServiceNow 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 ServiceNow Adapter connection:

- Purchase a subscription to ServiceNow. When you subscribe, you receive an instance name URL, username, and password. This information is required for creating a ServiceNow Adapter connection in the Connections page. See Configure Connection Properties and Configure Connection Security.
- A ServiceNow user with the Admin role or a custom user can use the ServiceNow Adapter in Oracle Integration. You can create a custom user (for example, the Integration User) in ServiceNow that can be assigned a custom role that has access to the tables shown in the following table in ServiceNow.
- Ensure that web services are enabled and respective permissions are assigned for the following tables in the ServiceNow instance.
- Ensure the Integration User has the appropriate role.

  A ServiceNow user with the default SOAP role (without any customization or changes) is required to configure or use the ServiceNow Adapter.

  The default SOAP role has the following permissions: can query, create, update, and delete records on all tables and execute scripts. While this is verifiable, ServiceNow recommends using the Admin role.

> **Note:**
>
> If a SOAP role has been modified or the SOAP role is not functional, you must follow the ServiceNow recommendations and use the Admin role. If you do not want to assign the Admin role, you can create a custom role, add accesses to the following tables, and assign the default SOAP role to the custom role.

Permissions	Operation
`sys_plugins`	To get standard applications.
`sys_app`	To get custom applications.

Permissions	Operation
`sys_db_object`	To get modules.
`sys_ui_section`	To get View fields in Get operations.
`sys_package`	To fetch standard packages. **Note**: This permission is required for both connections (that is, invoke and trigger connections).
`sys_ui_element`	To get View fields in Get operations.
`sys_soap_message`	For insert/delete of ServiceNow outbound SOAP messages. **Note**: This permission is not required if the ServiceNow Adapter is configured as an invoke connection.
`sys_soap_message_function`	For insert ServiceNow outbound SOAP message functions **Note**: This permission is not required if the ServiceNow Adapter is configured as an invoke connection.
`sys_script`	For insert/update/delete of ServiceNow business rules **Note**: This permission is not required if the ServiceNow Adapter is configured as an invoke connection.

Creating a Custom User and Assigning the Required Permissions

1. Create a custom role:
   a. Log in to the ServiceNow cloud application (*xxx*`.service-now.com`) with administrator credentials.
   b. On the home page, search for **Roles** in the search box in the left pane, and click **Roles** under **User Administration** in the search results.
   c. Click **New** to create a new role.
   d. Enter the required details and click **Submit**.
2. Enable web services for the preceding tables and assign permissions:
   a. Log in to the ServiceNow cloud application (*xxx*`.service-now.com`) with administrator credentials.
   b. On the home page, search for tables in the search box in the left pane, and click the **Tables** link under **System Definition** in the search results.
   c. Search for each of the ServiceNow tables from the preceding table using the **Search** box or locate a table using the show/hide filter.
   d. Click the table name or **Business Rule** (for the trigger role) in the search results.
   e. Locate and click the **Application Access** tab.
   f. For the invoke role, select the **Can read** check box (you can refer to the following table for required permissions), and select the **Allow access to this table via web services** check box if it is not selected already.

Table Name	Permission
Sys_db_object	Read Only
Sys_plugins	Read Only
Sys_app	Read Only
Sys_ui_section	Read Only
Sys_ui_element	Read Only
Sys_package	Read Only

g. For the trigger role, select the respective permission (refer to the following table for required permissions), and select the **Allow access to this table via web services** check box if it is not selected already.

Table Name	Permission
sys_soap_message	Create, Update, and Delete
sys_soap_message_function	Create, Update, and Delete
sys_script	Create, Update, and Delete
sys_db_object	Read Only
sys_plugins	Read Only
sys_app	Read Only
sys_ui_section	Read Only
Sys_ui_element	Read Only
Sys_package	Read Only

This provides the required access for the table and allows permission to access the table with web services.

3. Create or modify the access control list to assign permissions for the preceding tables.

   a. Assign the security_admin privileges to the admin user, if it is not assigned already. The admin user must have security_admin privileges to modify the access control lists.

      i. On the Home page, click the **lock** icon. In case of user interface 16, select **Elevate Roles** from the **System Administrator** dropdown list.

      ii. Select the **security_admin** check box if it is not selected already.

   b. Search for **Access Control** in the **Search** box in the left pane and click **Access Control (ACL)** under **System Security**.

   c. Create two access control lists for a table (that is, table level access control and field level access control) to provide read, create, and write access to any table.

   d. Create the table level access control list:

      i. Click **New**.

      ii. For the invoke role, select **record** in the **Type** field, select **read** in the **Operation** field, and select a table name (for example, sys_plugins) in the **Name** field.

      iii. For the trigger role, select **record** in the **Type** field, select **create** in the **Operation** field, and select a table name (for example, `sys_soap_message`) in the **Name** field.

iv. Under the **Requires role** section, search for the custom role (for example, Integration Specific Role), and click the check mark.

v. Click **Submit**.

e. Provide field level access control:

i. Click **New**.

ii. For the invoke role, select **record** in the **Type** field, select **read** in the **Operation** field, select a table name (for example, `sys_plugins`) in the **Name** field, and select ***** (asterisk) from the field next to the **Name** field.

iii. For the trigger role, select **record** in the **Type** field, select **create** in the **Operation** field, select a table name (for example, `sys_soap_message`) in the **Name** field, and select ***** (asterisk) from the dropdown list in the field next to the **Name** field.

iv. Under the **Requires role** section, search for the custom role (for example, Integration Specific Role), and click the check mark.

v. Click **Submit**.

4. Similarly, you must create an access control list for the preceding table to provide read, create, write, and delete permissions. If the access control list for a table exists, you can add the custom role under the **Requires Role** section.

a. On the home page, search for users in the search box in the left pane and click **Users** under **User Administration** in the search results.

b. Click **New** to create a new user.

c. Enter the required values and click **Submit**.

d. Search for the user with the user ID to assign roles.

e. In the **Roles** section, Click **Edit**.

f. Search for the custom role (for example, Integration Specific Role), SOAP, and ITIL roles, and assign these roles to the user.

g. Click **Save**.

Create 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 navigation pane, click **Integrations**, then click **Connections**.
2. Click **Create**.

> **Note:**
>
> You can also create a connection in the integration canvas of:
>
> - An orchestrated integration (See Define Inbound Triggers and Outbound Invokes.)
> - A basic routing integration (See Add a Trigger (Source) Connection.)

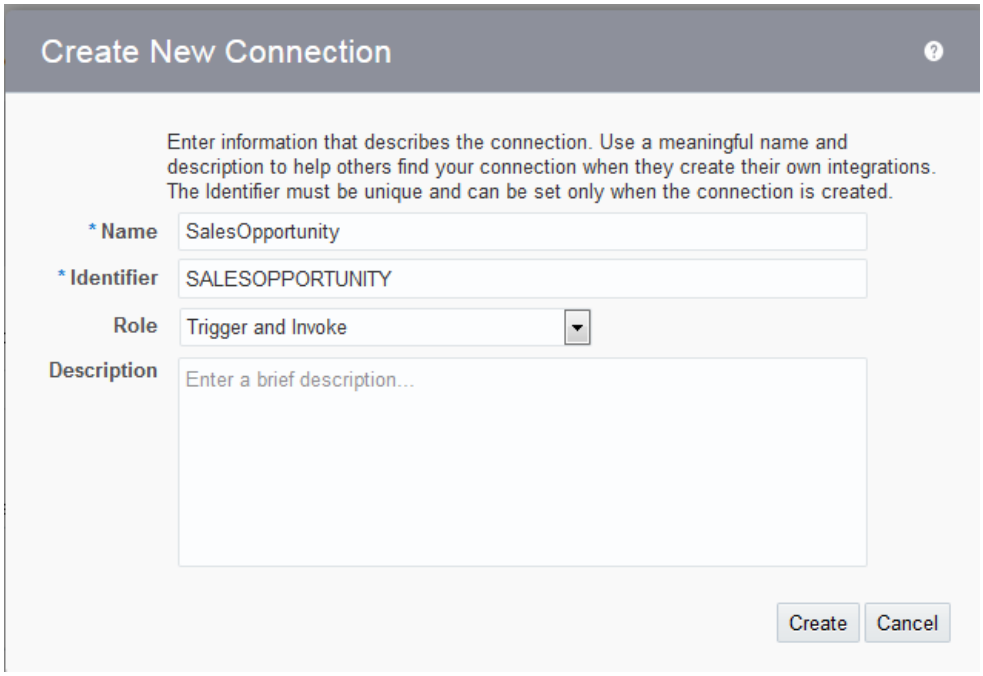
The Create Connection — Select Adapter dialog is displayed.

3. 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 Create New Connection dialog is displayed.

4. 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, `Sales Opportunity`).
   - 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 Service Cloud (RightNow) Adapter as only an invoke, but drag the adapter to the trigger section).
   - Enter an optional description of the connection.



5. Click **Create**.

   Your connection is created and you are now ready to configure connection details, such as email contact, connection properties, security policies, connection login credentials, and (for certain connections) agent group.

Add a Contact Email

You can add an optional contact email address for notifications.

1. In the **Email Address** field, enter an optional email address. You do *not* receive automatic notifications at this address.
2. In the upper right corner, click **Save**.

Configure Connection Properties

Enter connection information so your application can process requests.

1. Click **Configure Connectivity**.

   The Connection Properties dialog is displayed.
2. In the **ServiceNow Instance Name** field, enter the instance name URL (for example, `https://host_name.service-now.com`). You receive the instance name URL after you purchase a ServiceNow subscription.
3. Click **OK**.

   You are now ready to configure connection security.

Configure Connection Security

Configure security for your ServiceNow Adapter connection by selecting the security policy and security token.

1. Click **Configure Credentials**.
2. Enter your login credentials.
   a. Select the security policy. Only the Basic Authentication policy is supported. It cannot be deselected.
   b. Enter a username and password to connect to the ServiceNow instance. You receive the username and password after you purchase a ServiceNow subscription.
   c. Reenter the password a second time.
3. Click **OK**.

   You are now ready to test your connection.

Test the Connection

Test your connection to ensure that it is successfully configured.

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

   If your adapter connection uses a WSDL, a dialog is displayed that prompts you to select the type of connection testing to perform. Otherwise, this step is not applicable.

   - Select the 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.

If successful, the following message is displayed and the progress indicator shows 100%.
`Connection ***connection_name*** was tested successfully.`

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**, then click **Close**.

3

Add the ServiceNow Adapter Connection to an Integration

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

These topics describe the wizard pages that guide you through configuration of the ServiceNow Adapter as a trigger or invoke in an integration.

Topics:

- Basic Info Page
- Trigger Applications Page
- Trigger Fields Page
- Trigger Conditions Page
- Trigger Response Page
- Invoke Action Page
- Invoke Operations Page
- Invoke Extended Query Page
- Summary Page

Basic Info Page

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

Element	Description
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

Element	Description
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.`

Trigger Applications Page

Select an application and module for which you want receive notifications.

Element	Description
Select ServiceNow Application	Use the scrolling list to select an application for which you want to receive notifications when it is inserted, updated, or deleted. **Note**: The list shows the application name and the plug-in ID in case of a duplicate application name.
Filter By Application Name	Type the initial letters of the application name to filter the display of names in the list.
Select ServiceNow Module	Use the scrolling list to select a module from the application you previously selected. **Note**: The list shows the module name and the table reference in case more than one module name exists for the selected application.
Filter By Module Name	Type the initial letters of the module name to filter the display of names in the list. You can also select a filter type: • **All**: Displays all modules. • **Standard**: Displays standard modules delivered as part of the ServiceNow application. • **Custom**: Displays custom modules created.
Display Table Names instead of Module Names	Select this checkbox to switch to show table names instead of module names in the list.
Search Module/Table Tab	• **Search For Module or Table**: Type the initial letters of the module or table name to filter the display of names in the module list along with the corresponding application. • **Select Module**: Select a module from the list of modules you have filtered.

Trigger Fields Page

Specify the fields for which you want notification when they are inserted, updated, or deleted.

Element	Description
Type field name to filter	Type the initial letters of the field name to filter the display of names in the list. Use the dropdown menu to narrow or widen the list of fields: • ALL — Shows all of the available fields • CUSTOM — Shows only the custom fields • STANDARD — Shows only the standard fields
Available Fields	Use the scrolling list to select a list of fields for which you want to receive notifications when it is inserted, updated, or deleted. These are fields contained in the application and module you selected on the Configurations page. The fields are moved to the **Selected Fields** list as you select them. You can double-click on a field name or use the arrow buttons to move the field to the **Selected Fields** list.
Selected Fields	The list of fields you have selected.

Trigger Conditions Page

Select the actions that trigger a notification when they are performed on the selected fields. You can also set condition statements that govern the conditions under which the notifications are triggered.

Element	Description
Receive notifications when asset gets: • **Inserted** • **Updated** • **Deleted**	Select one or more of the listed events (inserted, updated, deleted) that will trigger a notification when it is performed on the selected application, module or field.
Enter field conditions	Use this part of the page to construct statements that govern the conditions under which the notifications are triggered. Click the checkbox to activate the condition control.

Trigger Response Page

Configure a callback response in the case of either a successful or failed integration flow.

Element	Description
Response Type	Select the **Configure a Success Response** or **Configure a Failure Response** checkbox to show the **Successful Response** or **Failed Response** tab.
Successful Response	Select the **Configure a Success Response** checkbox to activate the **Successful Response** tab. Select the application and module to configure for a successful callback response. Use the **Filter By Application/Module** name fields to filter the display of names in the list.

Element	Description
Failed Response	Select the **Configure a Failure Response** checkbox to activate the **Failed Response** tab. Select the application and module to configure for a successful callback response. Use the **Filter By Application/Module** name fields to filter the display of names in the list.
Select an Operation	Select one of the following operations to perform in the ServiceNow source application: • **Delete**: Delete a record from the selected table. • **Insert**: Create a new record for the selected table. • **Update**: Update an existing record in the selected table.

Invoke Action Page

Select the action to perform on an application and module.

Element	Description
Create, Update, or Delete Information	Create, update, or delete records from a selected application and module.
Query Information	Get records or information from a selected application and module based on the selected aggregate or get operation.
Attachment Information	Enables you to download, upload, or delete attachment metadata from or to a specific record in the module.

Invoke Operations Page

Select the operation and the application and module on which to perform the operation in the ServiceNow application. The fields that appear are based on the option that you selected on the Action page.

- Create, Update, or Delete Information
- Query Information
- Attachment Information

Create, Update, or Delete Information

If you selected **Create, Update, or Delete Information** on the Action page, the following options are displayed:

Element	Description
Select Application	Use the scrolling list to select an application within the selected operation.
Filter By Application Name	Enter the initial letters of the application name to filter the display of names in the list.
Select Module	Use the scrolling list to select a module within the selected operation.

Element	Description
Filter By Module Name	Enter the initial letters of the module name to filter the display of names in the list. You can also select a filter type: • **All**: Displays all modules. • **Standard**: Displays standard modules delivered as part of the ServiceNow application. • **Custom**: Displays custom modules created.
Display Table Names instead of Module Names	Select this checkbox to switch to display the table names instead of module names in the list.
Select an Operation	Select one of the following operations to perform in the ServiceNow application: • Create new records in the selected module/table. • Update an existing record in the selected module/table identified by the primary key (**sys_id**) field. • Delete single/multiple record(s) from the selected module/table based on the primary key (**sys_id**) field or other supplied values.
Search Module/Table Tab	• **Search For Module or Table**: Enter the initial letters of the module or table name to filter the display of names in the module list along with the corresponding application. • **Select Module**: Select a module from the list of modules you have filtered.

Query Information

If you selected **Query Information** on the Action page, the following options are displayed:

Element	Description
Select an Operation	• **Aggregate Operation**: Query a table using an aggregate function such as SUM, COUNT, MIN, MAX, or AVG. • **Get Operation**: Query the selected table by example values and return the matching records and their fields.
Get keys (Displayed only if the Get operation is selected)	If this checkbox is checked, the Get operation returns a list of `sys_ids` and the count of matching records.
Extended Query Parameters (Displayed only if the Get operation is selected)	Invokes the Extended Query Parameters page. Use this page to configure event criteria and extended query parameters used to filter the returned results. See Invoke Extended Query Page for a description.
Test Get Operation (Displayed only if the Get operation is selected)	**Test Get Operation** is enabled when the user selects the Get operation. Enables you to test the operation based on the parameters you selected.
Select Application	Use the scrolling list to select an application within the selected operation.
Filter By Application Name	Enter the initial letters of the application name to filter the display of names in the list.
Select Module	Use the scrolling list to select a module within the selected operation.
Filter By Module Name	Enter the initial letters of the module name to filter the display of names in the list.

Attachment Information

If you selected **Attachment Information** on the Action page, the following options are displayed:

Element	Description
Select an Operation	Select one of the following operations to perform in the ServiceNow application: • **Retrieve attachment(s) metadata of a record(s)** The following operations are supported: – **Single Attachment Metadata**: Fetches metadata of an attachment such as file name, content-type, and so on. – **Multiple Attachments Metadata**: Fetches metadata (file name, content-type, and so on) of all the attachments that a record contains. • **Download attachment of a specific record from the module/table** • **Upload attachment to a specific record of the module/table** • **Delete attachment from a specific record of the module/table**

If you selected the **Upload attachment to a specific record of the module/table** operation, the following options are displayed:

Element	Description
Select Application	Scroll through the list to select an application within the selected operation.
Filter By Application Name	Enter the initial letters of the application name to filter the display of names in the list.
Select Module	Use the scrolling list to select a module within the selected operation.
Filter By Module Name	Enter the initial letters of the module name to filter the display of names in the list.
Display Table Names instead of Module Names	Select this checkbox to show the table names instead of the module names in the list.

Invoke Extended Query Page

Enter the extended query parameter values for your integration.

> **Note:**
>
> This page is invoked by clicking the **Extended Query Parameters** button on the Operations page.

The following table describes the key information on the Extended Query Parameters page. For example, if you selected **Incident** as the table in which to query records and **GET** as the operation to perform on the table in ServiceNow, you may select a number from the **Order by** dropdown list in the **Extended Query Parameters** section and select **short_description** in the **Include Fields** section.

Element	Description
Extended Query Parameter	Select the extended query parameters to use from the following list: • **Order By** — Uses the specified field to order the returned results. • **Order By desc** — Uses the specified field to order the returned results in descending order. • **First row** — Offsets the results by this number of records from the beginning of the set. When used with **Last row**, it has the effect of querying for a window of results. The results include the first row number. • **Last row** — Limits the results by this number of records from the beginning of the set or the start row values when specified. When used with **First row**, it has the effect of querying for a window of results. Returns fewer results than the last row number and does not include the last row. • **Limit** — Limits the number of records returned. • **Use view** — Specifies the name of a form view that is used to limit and expand the returned results. When the form view contains deeply referenced fields (for example, `caller_id.email`), this field is also returned in the result.
Include Fields	Select the fields to include.
Filter By Field Name	Type the initial letters of the field name to filter the display of names in the list.
Select Fields to include	Displays the fields available to select from the application.
Included Fields	Displays the selected fields.
Encoded query	Build a custom query. For example: `Incident number is INC0022759 and Active is true`

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 **Back**. Click **Cancel** to cancel your configuration details.

4
Post-Activation Steps

After you activate an integration that includes a ServiceNow Adapter as a trigger (source) connection, you must perform the following activities.

Topics:

- Invoke an Integration from ServiceNow

Invoke an Integration from ServiceNow

There are two different processes that can be performed in ServiceNow to invoke an Oracle Integration integration from ServiceNow. Depending on the Oracle Integration version you are using, you must perform either of the following tasks.

- Configure Basic Authentication
- Configure Username Password Policy

Configure Basic Authentication

When you use Oracle Integration instance version 20.1.1.0.0 (200121.1400.33610) or later, you need to configure basic authentication to invoke an integration from ServiceNow.

1. Log in to ServiceNow using a valid username and password.
2. Search for the **SOAP Message** in the quick search bar.
3. Click **SOAP Message** under **Outbound** in the search results.
4. Search for the WSDL endpoint URL. You obtain this endpoint URL after activating an integration in the Oracle Integration instance.
5. Click the SOAP message name.
6. Scroll down and click the **businessEvent** link under **SOAP Message Functions**.
7. In the **Authentication type** field, select **Basic** from the dropdown list.
8. In the **Basic auth profile** field, click the search icon. The Basic Auth Configuration window is displayed.
9. Select the existing profile or click **New** to create a new profile and click **Update**.

Configure Username Password Policy

When you use an Oracle Integration instance with a version earlier than 20.1.1.0.0 (200121.1400.33610), perform the following steps to invoke an integration from ServiceNow.

1. Log in to ServiceNow using a valid username and password.

2. Search for the **Business Rules** in the quick search bar.
3. Click **Business Rules** under **System Definition** in the search results.
4. Search for the business rule ID. You obtain the business rule ID on the Summary page after configuring a ServiceNow endpoint in the Oracle Integration instance.
5. Click the business rule ID.
6. Locate the **Script** field and enter your Oracle Integration credentials in quotation marks.

> **Note:**
>
> When you configure the ServiceNow Adapter as a trigger (source) connection in an integration and perform an event in ServiceNow, but do not receive a request in the monitoring section of Oracle Integration, you must perform a workaround to resolve the issue. See Request from ServiceNow is Not Delivered to an Oracle Integration Instance.

The following table shows the applicable authentication policy and action required in different scenarios when an Oracle Integration instance is upgraded to version 20.1.1.0.0 (200121.1400.33610) or later.

Scenario	Applicable Authentication Policy	Action Required
When an Oracle Integration instance is upgraded to version 20.1.1.0.0 or later and the state of integration is active.	Username and token policy **Note**: If you deactivate the integration and activate it again, the Basic Authentication policy is applicable.	Enter your username and password in the business rule. See Configure Username Password Policy
When an integration is created after upgrading the Oracle Integration instance to version 20.1.1.0.0 or later.	Basic Authentication	Perform the steps required to configure the authentication profile. See Steps to Configure Basic Authentication.
When you import an IAR file to an Oracle Integration instance that is version 20.1.1.0.0 or later and activate the integration without doing any editing.	Basic Authentication	Perform the steps required to configure the authentication profile. See Steps to Configure Basic Authentication.
When an integration was initially inactive and later is activated after upgrading the Oracle Integration instance to version 20.1.1.0.0 or later.	Basic Authentication	Perform the steps required to configure the authentication profile. See Steps to Configure Basic Authentication.

> **Note:**
>
> When you upgrade an Oracle Integration instance to version 20.1.1.0.0 or later and activate an integration, the existing business rules with the same endpoint are disabled and new business rules are created with the latest scripts.

5

Troubleshoot the ServiceNow Adapter

Review these topics to learn about troubleshooting issues with the ServiceNow Adapter.

Topics:

- Request from ServiceNow is Not Delivered to an Oracle Integration Instance
- Retrieve Undelivered Messages When an Endpoint is Unavailable
- Error While Refreshing the Metadata for the ServiceNow Adapter Connection

Additional integration troubleshooting information is provided. See Troubleshoot Oracle Integration in *Using Integrations in Oracle Integration*.

Request from ServiceNow is Not Delivered to an Oracle Integration Instance

Assume you configure the ServiceNow Adapter as a trigger (source) connection in an integration and perform an event in ServiceNow, but do not receive a request in the monitoring section of Oracle Integration. The root cause of the problem is that the length of the integration WSDL endpoint exceeds 120 characters. This results in the ServiceNow request not being delivered to the Oracle Integration instance.

ServiceNow uses a SOAP message to send a request to third party applications and the WSDL endpoint as part of this message.

Perform the following workaround to resolve this issue:

1. Log in to the ServiceNow instance.
2. Enter `dictionary` in the search box in the left pane.
3. Click **Dictionary** under **System Definition** in the search results.
4. Filter the records with their **Table** set to **ecc_queue** and **Column** name set to **topic**.
5. In the **Table** column, click the record to open the details.
6. Edit the **Max length** field. You can enter any value more than 120 characters and less than 254 characters for single-line text.

   > **Note:**
   >
   > The ServiceNow Adapter recommends that the WSDL URL length not be longer than 250 characters.

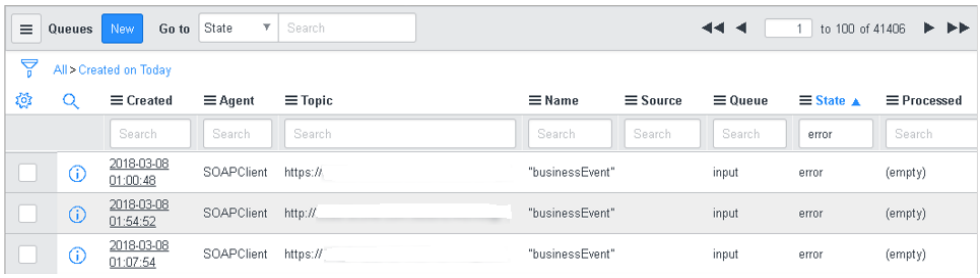
7. Click **Update**.

Retrieve Undelivered Messages When an Endpoint is Unavailable

When an endpoint is unavailable, messages in ServiceNow are not delivered. ServiceNow provides an External Communication Channel (ECC) queue to retrieve undelivered messages. The ECC Queue is a connection point between an instance (`https://host.service-now.com/`) and other systems that integrate with it. There is no API call provided by ServiceNow to resend the unavailable messages. You can recall the unavailable messages manually.

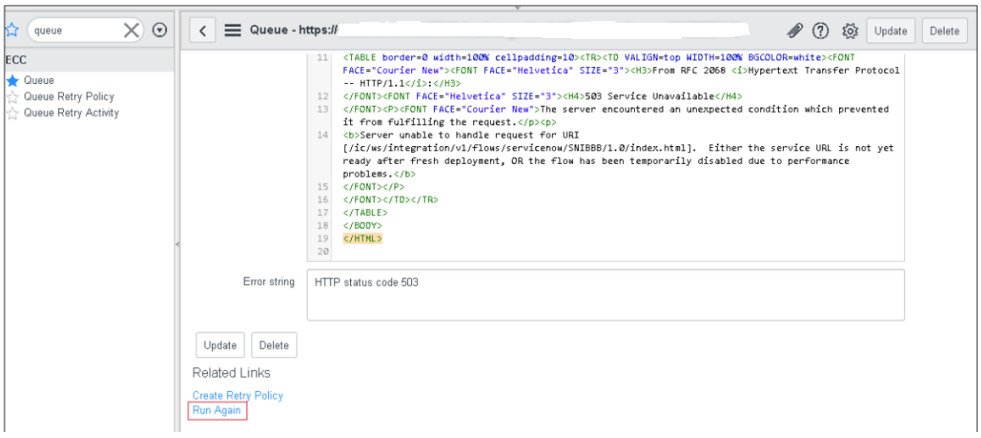
To resend undelivered messages:

1. Log in to the ServiceNow instance.
2. Go to **ECC Queue**.
3. Filter the messages with their **State** set to **error** to be displayed.



4. In the **Created** column, click any message to open the details.

   The message payload and reason for failure are displayed.



5. Click **Run Again** to resend the undelivered message.

   This action resends the message.

Error While Refreshing the Metadata for the ServiceNow Adapter Connection

When you select the **Refresh Metadata** option from the **Actions** menu for the ServiceNow Adapter connection, a download error is displayed while downloading the metadata.

For example, assume you perform the following steps:

1. Go to the Connections page.
2. Search for and select the ServiceNow Adapter connection.
3. Select **Refresh Metadata**.
4. Click the **information** icon and check the status of the refresh.

   The status of that refresh should be completed. Instead, a download error is displayed.

Perform the following workaround to resolve this issue:

1. Log in to the ServiceNow instance.
2. Enter `system properties` in the search box in the left pane.
3. Select and click **Web Services**.
4. Select the **Yes | No** check box for the highlighted property.