Oracle® Cloud

Using the HubSpot Adapter with Oracle Integration 3

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Preface

This guide describes how to configure this adapter as a connection in an integration in Oracle Integration.

> **Note:**
>
> The use of this adapter may differ depending on the features you have, or whether your instance was provisioned using Standard or Enterprise edition. These differences are noted throughout this guide.

Topics:

- Audience
- Documentation Accessibility
- Diversity and Inclusion
- Related Resources
- Conventions

Audience

This guide is intended for developers who want to use this adapter in integrations in Oracle Integration.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at `https://www.oracle.com/corporate/accessibility/`.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit `https://support.oracle.com/portal/` or visit `Oracle Accessibility Learning and Support` if you are hearing impaired.

Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

Related Resources

See these Oracle resources:

- Oracle Cloud at `http://cloud.oracle.com`
- *Using Integrations in Oracle Integration 3*
- *Using the Oracle Mapper with Oracle Integration 3*
- Oracle Integration documentation on the Oracle Help Center.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Understand the HubSpot Adapter

Review the following conceptual topics to learn about the HubSpot 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:

- HubSpot Adapter Capabilities
- HubSpot Adapter Restrictions
- What Application Version Is Supported?
- Workflow to Create and Add a HubSpot Adapter Connection to an Integration

HubSpot Adapter Capabilities

The HubSpot Adapter enables you to create an integration with the HubSpot application. You can configure the HubSpot Adapter as a trigger and an invoke connection in an integration in Oracle Integration.

The HubSpot Adapter provides the following benefits:

- Provides trigger (source) connection support to allow processing of notifications from HubSpot to Oracle Integration.
- Supports the following event types for trigger (source) connections:
  - Creation
  - Deletion
  - Property Change
- Supports HubSpot webhooks.
- Provides invoke (target) connection support for performing the following types of actions against the selected module and operation:
  - Create (create records in HubSpot)
  - Update (update records in HubSpot)
  - Query (get records from HubSpot)
  - Delete (delete records from HubSpot)
- Supports the Search API to get filtered and sorted results as per the business needs and retrieve the specified properties.
- Supports connecting to private resources that are in your virtual cloud network (VCN) with a private endpoint. See Connect to Private Resources in *Provisioning and Administering Oracle Integration 3* and Configure the Endpoint Access Type. This type of connection does not use the connectivity agent.
- Supports HubSpot APIs protected using OAuth 2.0 three-legged authentication (authorization code credentials).

The HubSpot Adapter is one of many predefined adapters included with Oracle Integration. See the Adapters page in the Oracle Help Center.

HubSpot Adapter Restrictions

Note the following HubSpot Adapter restrictions.

The HubSpot webhooks configuration (for trigger connections) has the following restrictions:

- Only one webhook listener URL (target URL) is allowed, per connected application, per tenant. Therefore, if you want to configure multiple HubSpot inbound integrations, you must create multiple connections. Consequently, for each new connection, a separate application must be created in the HubSpot portal that utilizes distinct credentials.
- Before you migrate (import/export) a HubSpot trigger integration (IAR) file from one Oracle Integration instance to another instance, you must deactivate the HubSpot trigger integration in the Oracle Integration instance. Select the **Delete event subscription** check box in the dialog that appears when you select to deactivate the integration.

> **Note:**
>
> There are overall service limits for Oracle Integration. A service limit is the quota or allowance set on a resource. See Service Limits.

What Application Version Is Supported?

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

Workflow to Create and Add a HubSpot Adapter Connection to an Integration

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

This table lists the workflow steps for both adapter tasks and overall integration tasks, and provides links to instructions for each step.

Step	Description	More Information
1	Access Oracle Integration.	Go to `https://instance_URL/ic/home`
2	Create the adapter connections for the applications you want to integrate. The connections can be reused in multiple integrations and are typically created by the administrator.	Create a HubSpot Adapter Connection

Step	Description	More Information
3	Create the integration. When you do this, you add trigger (source) and invoke (target) connections to the integration.	Understand Integration Creation and Best Practices in *Using Integrations in Oracle Integration 3* and Add the HubSpot Adapter Connection to an Integration
4	Map data between the trigger connection data structure and the invoke connection data structure.	Map Data in *Using Integrations in Oracle Integration 3*
5	(Optional) Create lookups that map the different values used by those applications to identify the same type of object (such as gender codes or country codes).	Manage Lookups in *Using Integrations in Oracle Integration 3*
6	Activate the integration.	Activate an Integration in *Using Integrations in Oracle Integration 3*
7	Monitor the integration on the dashboard.	Monitor Integrations During Runtime in *Using Integrations in Oracle Integration 3*
8	Track payload fields in messages during runtime.	Assign Business Identifiers for Tracking Fields in Messages and Track Integration Instances in *Using Integrations in Oracle Integration 3*
9	Manage errors at the integration level, connection level, or specific integration instance level.	Manage Errors in *Using Integrations in Oracle Integration 3*

2

Create a HubSpot Adapter Connection

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

Topics:

- Prerequisites for Creating a Connection
- Create a Connection
- Upload a Certificate to Connect with External Services

Prerequisites for Creating a Connection

You must satisfy the following prerequisites to create a connection with the HubSpot Adapter:

- Create a Developer Account
- Create an Application
- Obtain the API Key

Create a Developer Account

You must create a developer account. Go to https://developers.hubspot.com/get-started, enter the required details, and create a developer account.

Create an Application

To generate the client ID and client secret, you must create an application using the HubSpot Developer account.

1. Log in to your HubSpot Developer account.
2. On the home page, click **Create an app** or click the **Apps** tab and click **Create app**.
3. Enter a name for your application in the **Public app name** field.
4. Click the **Auth** tab.
5. Copy the App ID, client ID, and client secret.
   You'll need to enter these values on the Connections page when you configure security for your HubSpot Adapter connection in Oracle Integration. See Configure Connection Security.

   > **Note:**
   >
   > An App ID is required only for trigger connections.

6. Under the **Redirect URL** section, enter the redirect URL or URLs in the following format:

> **Note:**
>
> If you don't know the following information, check with your administrator:
>
> - If your instance is new or upgraded from Oracle Integration Generation 2 to Oracle Integration 3.
> - The complete instance URL with the region included (required for new instances).

For Connections...	Include the Region as Part of the Redirect URL?	Example of Redirect URL to Specify...
Created on new Oracle Integration 3 instances	Yes.	`https://` *`OIC_instance_URL`*`.`*`region`*`.ocp.oraclecloud.com/icsapis/agent/oauth/callback`
Created on instances upgraded from Oracle Integration Generation 2 to Oracle Integration 3	No. This applies to both: • New connections created after the upgrade • Existing connections that were part of the upgrade	`https://` *`OIC_instance_URL`*`.ocp.oraclecloud.com/icsapis/agent/oauth/callback`

7. Under the **Scopes** section, select scopes (permissions) for your application. For example, contact, tickets, e-commerce, and more. See the scopes documentation at Initiate an integration with OAuth 2.0.

Obtain the API Key

> **Note:**
>
> The API key is only required for trigger connections.

1. Log in to your HubSpot Developer account.
2. On the home page, click **Manage apps**.
3. Click **Get HubSpot API key**.
4. Click **Show Key**. The API key appears.
5. Copy the API key. You'll need to enter this value in the **API Key** field on the Connections page in Oracle Integration. See Configure Connection Security.

Create a Connection

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

To create a connection in Oracle Integration:

1. In the navigation pane, click **Design**, then **Connections**.
2. Click **Create**.

   > **Note:**
   >
   > You can also create a connection in the integration canvas. See Define Inbound Triggers and Outbound Invokes.

3. In the Create connection panel, select the adapter to use for this connection. To find the adapter, scroll through the list, or enter a partial or full name in the **Search** field.
4. Enter the information that describes this connection.

Element	Description
Name	Enter a meaningful name to help others find your connection when they begin to create their own integrations.
Identifier	Automatically displays the name in capital letters that you entered in the **Name** field. If you modify the identifier name, don't include blank spaces (for example, `SALES OPPORTUNITY`).
Role	Select the role (direction) in which to use this connection (trigger, invoke, or both). Only the roles supported by the adapter are displayed for selection. When you select a role, only the connection properties and security policies appropriate to that role are displayed on the Connections page. If you select an adapter that supports both invoke and trigger, but select only one of those roles, you'll get an error when you try to drag the adapter into the section you didn't select. For example, assume you configure a connection for the Oracle Service Cloud (RightNow) Adapter as only an **invoke**. Dragging the adapter to a **trigger** section in the integration produces an error.
Keywords	Enter optional keywords (tags). You can search on the connection keywords on the Connections page.
Description	Enter an optional description of the connection.

Element	Description
Share with other projects	**Note**: This field only appears if you are creating a connection in a project. Select to make this connection publicly available in other projects. Connection sharing eliminates the need to create and maintain separate connections in different projects. When you configure an adapter connection in a different project, the **Use a shared connection** field is displayed at the top of the Connections page. If the connection you are configuring matches the same type and role as the publicly available connection, you can select that connection to reference (inherit) its resources. See Add and Share a Connection Across a Project.

5. Click **Create**.

   Your connection is created. You're now ready to configure the connection properties, security policies, and (for some connections) access type.

Configure Connection Properties

Enter connection information so your application can process requests.

1. Go to the **Properties** section.
2. In the **Site URL** field, enter the base URL:

   ```
   https://api.hubapi.com
   ```

3. In the **REST Version** field, enter the supported HubSpot REST version using the following format. For example, for version 3:

   ```
   v3
   ```

4. (Only for trigger connections) In the **App Id** field, enter your HubSpot application ID. See Create an Application.
5. (Only for trigger connections) In the **API Key** field, enter your HubSpot API key. See Obtain the API Key.

Configure Connection Security

Configure security for your HubSpot Adapter connection by specifying the following information.

1. Go to the **Security** section.
2. In the **Client Id** field, enter the client ID that you obtained after performing the steps in the prerequisites section. See Create an Application.
3. In the **Client Secret** field, enter the client secret that you obtained after performing the steps in the prerequisites section. See Create an Application.
4. In the **Scope** field, enter a scope corresponding to the object you need to select. A space or comma must be entered between scopes if you need to provide more

than one scope. See the scopes documentation at Initiate an integration with OAuth 2.0.

> **Note:**
>
> The **Scope** field is not marked with an asterisk (*). This incorrectly implies that this field is not mandatory. This field is mandatory.

5. Click **Provide Consent** to verify the connection properties and get an access token. The HubSpot application login page is displayed.
6. Enter your HubSpot login credentials.
7. Once you see an access allowed message, you can test your connection.

Configure the Endpoint Access Type

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

- Select the Endpoint Access Type
- Ensure Private Endpoint Configuration is Successful

Select the Endpoint Access Type

Select the option for accessing your endpoint.

Option	This Option Appears If Your Adapter Supports ...
Public gateway	Connections to endpoints using the public internet.
Private endpoint	Connections to endpoints using a private virtual cloud network (VCN). **Note**: To connect to private endpoints, you must complete prerequisite tasks in the Oracle Cloud Infrastructure Console. Failure to do so results in errors when testing the connection. See Connect to Private Resources in *Provisioning and Administering Oracle Integration 3* and Troubleshoot Private Endpoints in *Using Integrations in Oracle Integration 3*.

Ensure Private Endpoint Configuration is Successful

- To connect to private endpoints, you must complete prerequisite tasks in the Oracle Cloud Infrastructure Console. Failure to do so results in errors when testing the connection. See Connect to Private Resources in *Provisioning and Administering Oracle Integration 3*.
- When configuring an adapter on the Connections page to connect to endpoints using a private network, specify the fully-qualified domain name (FQDN) and *not* the IP address. If you enter an IP address, validation fails when you click **Test**.
- IPSec tunneling and FastConnect are not supported for use with private endpoints.

Test the Connection

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

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

If Your Connection...	Then...
Doesn't use a WSDL	The test starts automatically and validates the inputs you provided for the connection.
Uses a WSDL	A dialog prompts you to select the type of connection testing to perform: • **Validate and Test**: Performs a full validation of the WSDL, including processing of the imported schemas and WSDLs. Complete validation can take several minutes depending on the number of imported schemas and WSDLs. No requests are sent to the operations exposed in the WSDL. • **Test**: Connects to the WSDL URL and performs a syntax check on the WSDL. No requests are sent to the operations exposed in the WSDL.

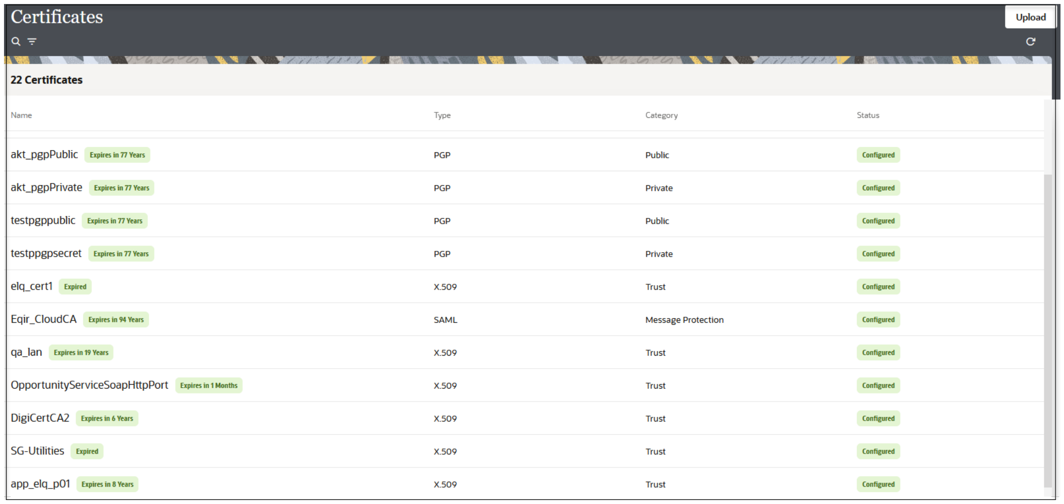
2. Wait for a message about the results of the connection test.
   - If the test was successful, then the connection is configured properly.
   - If the test failed, then edit the configuration details you entered. Check for typos and verify URLs and credentials. Continue to test until the connection is successful.
3. When complete, click **Save**.

Upload a Certificate to Connect with External Services

Certificates allow Oracle Integration to connect with external services. If the external service/endpoint needs a specific certificate, request the certificate and then import it into Oracle Integration.

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

1. Sign in to Oracle Integration.
2. In the navigation pane, click **Settings**, then **Certificates**.
   All certificates currently uploaded to the trust store are displayed on the Certificates page.
3. Click **Filter** to filter by name, certificate expiration date, status, type, category, and installation method (user-installed or system-installed). Certificates installed by the system cannot be deleted.



4. Click **Upload** at the top of the page.
   The Upload certificate panel is displayed.
5. Enter an alias name and optional description.
6. In the **Type** field, select the certificate type. Each certificate type enables Oracle Integration to connect with external services.
   - Digital Signature
   - X.509 (SSL transport)
   - SAML (Authentication & Authorization)
   - PGP (Encryption & Decryption)
   - Signing key

Digital Signature

The digital signature security type is typically used with adapters created with the Rapid Adapter Builder. See Learn About the Rapid Adapter Builder in Oracle Integration in *Using the Rapid Adapter Builder with Oracle Integration 3*.

1. Click **Browse** to select the digital certificate. The certificate must be an X509Certificate. This certificate provides inbound RSA signature validation. See Implement Digital Signature Validation (RSA) in *Using the Rapid Adapter Builder with Oracle Integration 3*.
2. Click **Upload**.

X.509 (SSL transport)

1. Select a certificate category.
   a. **Trust**: Use this option to upload a trust certificate.
      i. Click **Browse**, then select the trust file (for example, `.cer` or `.crt`) to upload.
   b. **Identity**: Use this option to upload a certificate for two-way SSL communication.
      i. Click **Browse**, then select the keystore file (`.jks`) to upload.
      ii. Enter the comma-separated list of passwords corresponding to key aliases.

> **Note:**
>
> When an identity certificate file (`.jks`) contains more than one private key, all the private keys must have the same password. If the private keys are protected with different passwords, the private keys cannot be extracted from the keystore.

iii. Enter the password of the keystore being imported.

c. Click **Upload**.

SAML (Authentication & Authorization)

1. Note that **Message Protection** is automatically selected as the only available certificate category and cannot be deselected. Use this option to upload a keystore certificate with SAML token support. Create, read, update, and delete (CRUD) operations are supported with this type of certificate.
2. Click **Browse**, then select the certificate file (`.cer` or `.crt`) to upload.
3. Click **Upload**.

PGP (Encryption & Decryption)

1. Select a certificate category. Pretty Good Privacy (PGP) provides cryptographic privacy and authentication for communication. PGP is used for signing, encrypting, and decrypting files. You can select the private key to use for encryption or decryption when configuring the stage file action.
   a. **Private**: Uses a private key of the target location to decrypt the file.
      i. Click **Browse**, then select the PGP file to upload.
      ii. Enter the PGP private key password.
   b. **Public**: Uses a public key of the target location to encrypt the file.
      i. Click **Browse**, then select the PGP file to upload.
      ii. In the **ASCII-Armor Encryption Format** field, select **Yes** or **No**.
         - **Yes** shows the format of the encrypted message in ASCII armor. ASCII armor is a binary-to-textual encoding converter. ASCII armor formats encrypted messaging in ASCII. This enables messages to be sent in a standard messaging format. This selection impacts the visibility of message content.
         - **No** causes the message to be sent in binary format.
      iii. From the **Cipher Algorithm** list, select the algorithm to use. Symmetric-key algorithms for cryptography use the same cryptographic keys for both encryption of plain text and decryption of cipher text. The following supported cipher algorithms are FIPS-compliant:
         - AES128
         - AES192
         - AES256
         - TDES
   c. Click **Upload**.

Signing key

A signing key is a secret key used to establish trust between applications. Signing keys are used to sign ID tokens, access tokens, SAML assertions, and more. Using a private signing key, the token is digitally signed and the server verifies the authenticity of the token by using a public signing key. You must upload a signing key to use the OAuth Client Credentials using JWT Client Assertion and OAuth using JWT User Assertion security policies in REST Adapter invoke connections. Only PKCS1- and PKCS8-formatted files are supported.

1. Select **Public** or **Private**.
2. Click **Browse** to upload a key file.
   If you selected **Private**, and the private key is encrypted, a field for entering the private signing key password is displayed after key upload is complete.
3. Enter the private signing key password. If the private signing key is not encrypted, you are not required to enter a password.
4. Click **Upload**.

3 Add the HubSpot Adapter Connection to an Integration

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

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

Topics:

- Basic Info Page
- Trigger Operation Page
- Invoke Action Page
- Invoke Operation 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 hyphens in the name. You can't include the following characters: • No blank spaces (for example, `My Inbound Connection`) • No special characters (for example, `#;83&` or `righ(t)now4`) except underscores and hyphens • No 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.`

Trigger Operation Page

Specify the conditions that must be met for the trigger to run.

Element	Description
Select Object	Select an object. The supported objects are: • **Company** • **Contact** • **Deal** • **Line_Item** • **Product** • **Ticket**
Select Event Type	Choose an event type for the selected object, such as **creation**, **deletion**, or **property change**.
Property Name (Displays if you select the **property change** event type.)	Select the property name, such as **amount**, **createdate**, **description**, **discount**, and so on.

Invoke Action Page

Select the type of action to perform.

Element	Description
What would you like to do in HubSpot?	• **Create, update, and delete**: Creates a new record, updates an existing record, or deletes a record in/from the HubSpot application (for example, **Create companies**, **Create products**, **Update deals**, **Delete tickets**, and so on). • **Query information**: Retrieves information from the HubSpot application corresponding to the selected object and operation. • **Search with filters and sort**: Retrieves filtered and sorted results as per the business needs and the specified properties.

Invoke Operation Page

Select the object and operation to perform in the HubSpot application. The fields that appear are based on the selection you made on the Action page.

- Create, Update, and Delete
- Query Information
- Search with Filters and Sort

Create, Update, and Delete

Element	Description
Select Operation	Displays the following options: **Create**, **Update**, and **Delete**.
Operation Description	Displays a description of the selected operation.
Filter object by name	Type the initial letters to filter the display of business objects. You can also select a filter type: • **All**: Displays all objects. • **Standard**: Displays business objects delivered as part of the HubSpot application. • **Custom**: Displays objects you created.
Select Object	Select an object, such as **companies**, **products**, **line_items**, **tickets**, and so on.

Query Information

Element	Description
Filter object by name	Type the initial letters to filter the display of business objects. You can also select a filter type: • **All**: Displays all objects. • **Standard**: Displays business objects delivered as part of the HubSpot application. • **Custom**: Displays objects you created.
Select Object	Select an object, such as **companies**, **products**, **line_items**, **tickets**, and so on.
Filter operation by name	Type a keyword or the initial letters of the operation name to filter the display of names in the list.
Select Operation	Select an operation name, such as **Retrieve record by Id**.

Search with Filters and Sort

Element	Description
Select Object	Select an object, such as **companies**, **products**, **line items**, **tickets**, and so on.
Filter parameters	Select filters, such as **LT**, **LTE**, **GT**, **GTE**, **OR**, **AND**, and so on. • **Delete**: Click to remove the filter. • **Test Search Operation**: Click to validate the value provided for the selected filter.
Add sorting	Select the sorting in ascending or descending order. • **Remove sorting**: Click to remove sorting.

Element	Description
Select properties	• **Name**: Type a keyword or the initial letters of the property to filter the display of names in the list. • **Available**: Displays the properties to select. • **Selected**: Displays the selected properties. • **Remove properties**: Click to remove properties.

Summary Page

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

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