Red Hat Fuse 7.9

Fuse Online Sample Integration Tutorials

Explore how to use Fuse Online, the web-based Fuse distribution, to create sample integrations

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Abstract

Follow step-by-step instructions for creating Fuse Online sample integrations.

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PREFACE

Fuse Online lets you obtain data from an application or service, operate on that data if you need to, and then send the data to a completely different application or service. You can do all this without writing code.

Explore Fuse Online by creating the sample integrations. The comparison table can help you decide which sample integration to create first. Then see the instructions for creating the sample integrations.

- Chapter 2, *Implementing the Twitter to Salesforce sample integration*
- Chapter 3, *Implementing the Salesforce to database sample integration*
- Chapter 4, *Implementing the AMQ to REST API sample integration*

A user guide for Fuse Online is also available.

To obtain support, in Fuse Online, in the left navigation panel, click **Support**, or in the upper right, click and then select **Support**.

MAKING OPEN SOURCE MORE INCLUSIVE

Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see our CTO Chris Wright's message.

CHAPTER 1. CHOOSING THE SAMPLE INTEGRATION TO CREATE FIRST

You can create the sample integrations in any order. To help you decide which one to try first, the following table compares them.

	Twitter to Salesforce	Salesforce to Database	AMQ to REST API
What it does	Captures and filters tweets that mention a particular Twitter user. For tweets that contain specified text, the integration passes data related to the tweet to Salesforce and Salesforce creates a new contact.	Captures updates in Salesforce and then calls a database stored procedure to synchronize a particular database table with the Salesforce updates.	Obtains delivery records from a Red Hat AMQ broker, executes a custom step to identify any items that were damaged when they were received, and connects to a REST API to provide contact information for vendors of damaged items.
What you learn about	Connecting to Twitter and Salesforce, how Fuse Online interfaces with applications that use the OAuth protocol, mapping data fields received from one application to fields that the next connected application in the integration can operate on, filtering data to determine whether to continue integration execution.	Connecting to Salesforce and a SQL database, OAuth support, data mapping, how to update a SQL database as part of an integration.	Connecting to a Red Hat AMQ broker and a REST API, data mapping, uploading extensions for a step and for a REST API client connector, using a custom step and a custom API client connection.
Average minutes to complete	25	20	25
Notes about the time	This includes the time needed to obtain Twitter and Salesforce accounts. It does not include 5 - 12 minutes of waiting for Salesforce registration to take effect and for Fuse Online to start running the integration.	20 minutes includes the time needed to obtain a Salesforce developer account but not the time spent waiting. If you already created the Twitter to Salesforce sample then it takes 10 minutes to create this integration.	This does not include the time it takes for Fuse Online to start running the integration.

Prerequisites	Twitter developer account, Salesforce developer account	Salesforce developer account, sample **todo** application enabled, and sample Postgres database enabled	Sample **todo** application and sample Postgres database enabled

CHAPTER 2. IMPLEMENTING THE TWITTER TO SALESFORCE SAMPLE INTEGRATION

This sample integration watches Twitter for tweets that mention a particular Twitter user. When the integration finds such tweets, it filters them so that only those tweets that contain the text that you specify cause the integration to continue.

For tweets that contain the specified text, the integration passes data related to the tweet, including the Twitter user name, to Salesforce and Salesforce creates a new contact.

Prerequisites

- You need a Twitter developer account. If you do not already have one, go to https://apps.twitter.com, sign in to Twitter, and click **Apply for a developer account** Obtaining the developer account is quick when you provide a professional email address, such as **me@redhat.com** rather than a personal address such as **you@gmail.com**.
- You need an account in a Salesforce installation that is used for development. This account must have Salesforce API access, which is available in a Salesforce Enterprise account or a Salesforce Developer account. To obtain a free developer account, visit https://developer.salesforce.com/signup. It takes less than two minutes to obtain a Salesforce account.
- You must be logged in to your Fuse Online environment.

To implement, deploy, and test this sample integration, the main steps are:

1. Section 2.1, “Registering Fuse Online as a Twitter client application”
2. Section 2.2, “Creating a Twitter connection”
3. Section 2.3, “Registering Fuse Online as a Salesforce client application”
4. Section 2.4, “Creating a Salesforce connection”
5. Section 2.5, “Creating and deploying the Twitter to Salesforce sample integration”
6. Section 2.6, “Confirming that the Twitter to Salesforce integration works”
7. Section 2.7, “Cleaning up your integration”

2.1. REGISTERING FUSE ONLINE AS A TWITTER CLIENT APPLICATION

In an integration, to connect to Twitter, the first thing you must do is register your Fuse Online environment as a client application that can access Twitter. This lets you create any number of integrations that connect to Twitter. In other words, you need to register a particular Fuse Online environment with Twitter only once.

In each Fuse Online environment, there can be only one registration of Fuse Online as a Twitter client application. However, while each Twitter connection uses the same registration, it can use different user credentials.

Prerequisite

You are logged in to Fuse Online.

Procedure

1. In Fuse Online:
   a. In the left panel, click **Settings**.
   b. On the **Settings** page, near the top, to the right of the callback URL, click to copy the callback URL for your installation of Fuse Online to the clipboard. You will need this URL later in this procedure.
   c. Click the **Twitter** entry to display the **Consumer API Key** and **Consumer API Secret Key** fields.
2. In another browser tab, go to your Twitter developer account, sign in if you need to, and then do the following:
   a. Click **Projects & Apps**.
   b. On the **Overview** page, scroll down to click **Create an app**.
   c. In the **App name** field, enter a name such as **My Fuse Online Client**.
   d. In the **Application description** field, enter a tip such as **For leveraging tweets**.
   e. Scroll down to **Set up Your App** and then click **App settings**.
   f. Next to **Authentication Settings**, click **Edit**.
   g. Switch on the **Enable 3-legged OAuth** option.
   h. In the **Callback URLs** field, paste the URL that you copied at the beginning of this procedure. It should be something like this: **https://app-proj912876.7b63.fuse-ignite.openshiftapps.com/api/v1/credentials/callback**
   i. In the **Website URL** field, paste the URL again and remove **api/v1/credentials/callback** from the end of the URL.
   You can skip the next few fields.
   j. Click **Save**.
   k. At the top of the page for the app that you just created, click the **Keys and tokens** tab.
   l. Under **Consumer Keys**, click **View keys**.
   m. Copy the API key.
3. Return to your Fuse Online **Settings** page and paste the Twitter consumer API key into the Fuse Online Twitter **Consumer API Key** field.
4. Return to the Twitter **Keys and tokens** tab and copy the consumer API secret key.
5. Return to your Fuse Online **Settings** page and paste the Twitter consumer API secret key into the Fuse Online Twitter **Consumer API Secret Key** field.
6. Click **Save**.
7. Click the **Twitter** entry to collapse it.

2.2. CREATING A TWITTER CONNECTION

To create an integration that obtains data from Twitter, you must first create a Twitter connection. After you create a Twitter connection, you can use it in any number of integrations.

Prerequisites

- You are logged in to Fuse Online.
- Fuse Online is open in a web browser.
- You registered your Fuse Online environment as an application that can access Twitter.
- You added the Twitter consumer API key and consumer API secret key that you received after registration to the Fuse Online **Settings** page.

Procedure

1. In Fuse Online, in the left panel, click **Connections** to display any available connections.
2. Click **Create Connection** to display the available connectors. A connector is a template that you use to create one or more connections.
3. Click the **Twitter** connector.
4. Click **Connect Twitter** to display a Twitter authorization page. You might need to log in to Twitter before you see the authorization page.
   If **Connect Twitter** does not appear, then your Fuse Online environment is not registered as a Twitter client application. See Registering Fuse Online as a Twitter client application . When you try to create a Twitter connection and your Fuse Online environment is not registered as a Twitter client application, then Fuse Online displays multiple fields that prompt for authorization information. While you can create a Twitter connection by entering values in these fields, it is not recommended.
5. Click **Authorize app** to return to Fuse Online.
6. In the **Name** field, enter your choice of a name that helps you distinguish this connection from any other connections. For example, enter **Twitter Connect 1**.
7. In the **Description** field, optionally enter any information that is helpful to know about this connection. For example, enter **Sample Twitter connection that uses my Twitter login credentials.**
8. Click **Save** to see that the connection you created is now available. If you entered the example name, you would see that **Twitter Connect 1** appears as a connection that you can choose to add to an integration.

2.3. REGISTERING FUSE ONLINE AS A SALESFORCE CLIENT APPLICATION

In an integration, to connect to Salesforce, the first thing you must do is register your Fuse Online environment as a client application that can access Salesforce. This lets you create any number of integrations that connect to Salesforce. In other words, you need to register a particular Fuse Online environment with Salesforce only once.

In each Fuse Online environment, there can be only one registration of Fuse Online as a Salesforce client application. However, while each Salesforce connection uses the same registration, it can use different user credentials.

If you already registered Fuse Online as a Salesforce client and created a Salesforce connection, skip to Creating and deploying the Twitter to Salesforce integration .

Prerequisite

You are logged in to Fuse Online.

Procedure

1. In Fuse Online:
   a. In the left panel, click **Settings**.
   b. On the **Settings** page, near the top, to the right of the callback URL, click to copy the callback URL for your Fuse Online environment to the clipboard. You will need this URL toward the end of this procedure.
   c. Click the **Salesforce** entry to display the **Client ID** and **Client Secret** fields.
2. In another browser tab, log in to your Salesforce account and follow the steps below to create a connected app. These instructions assume that you are using the Salesforce Classic user interface. To switch from the Salesforce Lightning Experience interface, click your profile icon and select **Switch to Salesforce Classic**. For additional information, see the Salesforce documentation for Create a Connected App .
   a. In Salesforce, in the upper right, click **Setup**.
   b. In the left panel, select **Build** > **Create** > **Apps**.
   c. Scroll down to **Connected Apps** and click **New**.
   d. Enter the required information and then select **Enable OAuth Settings**.
   e. In the **Callback URL** field, paste your Fuse Online URL, which you copied at the beginning of this procedure. For example: **https://app-proj912876.7b63.fuse-ignite.openshiftapps.com/api/v1/credentials/callback**.
   f. For **OAuth Scopes**, add:
      - **Access and manage your data (api)**
      - **Allow access to your unique identifier (openid)**
      - **Perform requests on your behalf at any time (refresh_token, offline_accesss)**
   g. Select **Configure ID token** and then **Include Standard Claims**.
   h. Scroll down and click **Save**.

i. Scroll up to see that Salesforce indicates a short wait:

j. Click **Continue**.

k. Copy the consumer key that Salesforce provides.

3. Return to your Fuse Online **Settings** page and paste the Salesforce-provided consumer key into the Fuse Online Salesforce **Client ID** field.

4. Return to Salesforce and copy the consumer secret that Salesforce provides.

5. Return to your Fuse Online **Settings** page and paste the Salesforce-provided consumer secret into the Fuse Online Salesforce **Client Secret** field.

6. Click **Save**.

7. Click the **Salesforce** entry to collapse it.

2.4. CREATING A SALESFORCE CONNECTION

To create an integration that accesses data in Salesforce, you must first create a Salesforce connection. After you create a Salesforce connection, you can use it in multiple integrations.

Prerequisites

- You are logged in to Fuse Online.
- Fuse Online is open in a web browser.
- You must have already registered your Fuse Online environment as an application that can access Salesforce.
- You added the Salesforce client ID and client secret that you received after registration to the Fuse Online **Settings** page.
  If you did not already register Fuse Online, see Registering Fuse Online as a Salesforce client application.

  Be sure to wait 2 - 10 minutes after registering your Fuse Online installation as a Salesforce client before you try to create a Salesforce connection.

Procedure

1. In Fuse Online, in the left panel, click **Connections** to display available connections.

2. Click **Create Connection** to display the available connectors. A connector is a template for creating one or more connections.

3. Click the **Salesforce** connector.

4. Click **Connect Salesforce** to display a Salesforce authorization page. You might need to log in to Salesforce before you see the authorization page.

If **Connect Salesforce** does not appear, then your Fuse Online environment is not registered as a Salesforce client application. See Registering Fuse Online as a Salesforce client application . When you try to create a Salesforce connection and your Fuse Online environment is not registered as a Salesforce client application, then Fuse Online displays multiple fields that prompt for authorization information. While you can create a Salesforce connection by entering values in these fields, it is not recommended.

NOTE

The following error indicates that Salesforce does not have the correct Fuse Online callback URL:

error=redirect_uri_mismatch&error_description=redirect_uri%20must%20match%20configuration

If you get this error message, then in Salesforce, ensure that the Fuse Online callback URL is specified according to the instructions in Registering Fuse Online as a Salesforce client application.

5. Click **Allow** to return to Fuse Online.
6. In the **Name** field, enter your choice of a name that helps you distinguish this connection from any other connections. For example, enter **SF Connect 1**.
7. In the **Description** field, optionally enter any information that is helpful to know about this connection. For example, enter **Sample Salesforce connection that uses my Salesforce login credentials.**
8. Click **Save** to see that the connection you created is now available. If you entered the example name, you would see that **SF Connect 1** appears as a connection that you can choose to add to an integration.

2.5. CREATING AND DEPLOYING THE TWITTER TO SALESFORCE SAMPLE INTEGRATION

To create and deploy an integration that uses the Twitter and Salesforce connections that you created, the main steps are:

- Section 2.5.1, “Choosing the start connection”
- Section 2.5.2, “Choosing the finish connection”
- Section 2.5.3, “Adding a basic filter step”
- Section 2.5.4, “Adding a data mapping step”
- Section 2.5.5, “Giving the integration a name and deploying it”

Prerequisites

- You registered your Fuse Online environment as a Twitter client and created a Fuse Online Twitter connection.
- You registered your Fuse Online environment as a Salesforce client and created a Fuse Online Salesforce connection.

- Fuse Online is open and you are logged in.

2.5.1. Choosing the start connection

In Fuse Online, to create the sample Twitter to Salesforce integration, the first task is to choose the start connection.

Prerequisites

- You created a Twitter connection.

Procedure

1. On the left, click **Integrations**.
2. Click **Create Integration**.
3. On the **Choose a connection** page, click the Twitter connection that you created. If you gave it the example name, you would click **Twitter Connect 1**. When the integration starts, it uses the credentials defined in this connection to connect to Twitter.
4. On the **Choose an action** page, to the right of the **Mention** action entry, click **Select**.
5. On the **Configure the action** page, click **Next**. No configuration is required.

Next step

When the integration is running, after connecting to Twitter, the integration monitors Twitter for mentions that include your Twitter screen name. A match triggers the next step in the integration. However, before you add steps that operate on data between connections, you choose the connection that the integration uses to finish its work.

2.5.2. Choosing the finish connection

In Fuse Online, to continue creating the Twitter to Salesforce sample integration, after you add the start connection, you add the finish connection to the integration.

Prerequisites

- You added the Twitter connection to the integration as the start connection.
- Fuse Online is prompting you to add the finish connection.
- You created a Salesforce connection.

Procedure

1. On the **Choose a connection** page, click the Salesforce connection that you created. If you gave it the example name, you would click **SF Connect 1**. This integration finishes by using the credentials defined in this connection to connect to Salesforce.
2. On the **Choose an action** page, to the right of the **New record** entry, click **Select**.
3. On the **Configure the action** page, click in the **Object name** field and select **Contact** as the Salesforce record to create.

4. Click **Next** to add the finish connection to the integration.

2.5.3. Adding a basic filter step

In Fuse Online, to continue creating the Twitter to Salesforce sample integration, add a basic filter step that checks tweets that mention you for particular content. At integration execution time, processing continues only if that content is present.

Prerequisites

- You added the Twitter connection as the integration's start connection.
- You just added the Salesforce connection as the integration's finish connection.

Procedure

1. In the integration visualization, click the plus sign, which displays the steps that you can add to the integration.
2. Click **Basic Filter**.
3. In the **Property Name** field, start to enter **text** and when **text** appears below the field, click it. The Twitter **text** field, which contains a tweet, is the data that you want the filter to evaluate.
4. In the **Operator** field, accept **contains** as the condition to be met for the integration to continue.
5. In the **Keywords** field, enter **#RedHatIsGreat** or some other text that you choose for the value to check for. A tweet that mentions you must contain the text you enter here for the integration to continue operating on this data.
6. Click **Done** to add the basic filter step to the integration.

2.5.4. Adding a data mapping step

To continue creating the Twitter to Salesforce sample integration, add a data mapping step that correlates Twitter mention fields to Salesforce contact fields.

Prerequisites

- The integration's start connection is to Twitter.
- The integration's finish connection is to Salesforce.
- You just added the filter step between the two connections.

Procedure

1. In Fuse Online, in the integration visualization, click the plus sign that is between the filter step and the finish connection.
2. Click **Data Mapper** and wait a few moments. When the data fields appear, the **Sources** panel on the left displays the Twitter fields and the **Target** panel on the right displays the Salesforce fields.

3. Map the Twitter **name** field to the Salesforce **FirstName** and **LastName** fields:

   a. In the **Sources** panel, click the magnifying glass to display the search field and enter **name**.

   b. Under the **user** folder, click the **name** field and then click the **Create New Mapping** icon.

   c. In the **Mapping Details** panel, in the **Targets** field, type **FirstName** to filter the list of target fields and then select **/FirstName**. The data mapper displays a line from the source **name** field to the target **FirstName** field.

   d. In the **Mapping Details** panel, in the **Targets** field, type **LastName** to filter the list of target fields and then select **/LastName**.
   The data mapper displays another line from the Twitter **name** field, but this time it goes to the Salesforce **LastName** field. The blue lines indicate the current focus.

   NOTE

   If you accidentally map the wrong fields then delete the incorrect mapping by clicking the trash can icon in the data mapper's **Mapping Details** panel.

4. Map the Twitter **screenName** field to the Salesforce **Title** field:

   a. In the **Sources** panel, click the **screenName** field.

   b. On the right, at the top of the **Target** panel, click the magnifying glass to display the search field and enter **Title**.

   c. Click the **Title** field. The data mapper displays a line from the Twitter **screenName** field to the Salesforce **Title** field.

5. Map the Twitter **text** field to the Salesforce **Description** field:

   a. In the **Sources** search field, enter **text** and click the **text** field. Be sure to click the toplevel **text** field. Do not click one of the **text** fields that is contained in the **user** field.

   b. In the **Target** search field, enter **description**.

   c. Click the Salesforce **Description** field to create the mapping.

6. In the upper right, click the grid icon to display the list of mappings, which should look like this:

Mappings

Sources	Targets	Types
screenName	Title	One to One
name	FirstName LastName	One to Many (Split)
text	Description	One to One

7. In the upper right, click **Done**.

2.5.5. Giving the integration a name and deploying it

When the Twitter to Salesforce sample integration is complete then you can deploy it and see how it works.

Prerequisites

- The integration's start connection is Twitter.
- The integration's finish connection is Salesforce.
- The integration has a filter step.
- You just added a data mapping step to the integration.

Procedure

1. In the upper right corner, click **Publish**.
2. In the **Name** field, enter a name of your choice that distinguishes this integration from any other integrations. For example: **Twitter to Salesforce Sample Integration**.
3. In the **Description** field, optionally enter some information about the integration.
4. Click **Save and publish**.
   Fuse Online starts to deploy the integration and then displays the integration summary. Near the top, you can see a progress indicator that shows the publishing stages. Fuse Online is generating the runtime for the integration and will start it when the runtime is ready. This takes a few minutes.

   A Fuse Online account is limited to a specific number of integrations that can be running at one time. For details, see the pricing plan. If you are already running the maximum number of integrations, then you must stop an integration before you can start running another one.
5. If you are already running the maximum number of integrations, follow these steps to stop an integration:

   a. In the left panel, click **Integrations**.

   b. In the entry for the integration that you want to stop, click on the far right.

   c. In the popup, click **Stop**.

6. After stopping an integration, start another integration as follows:

   a. In the left panel, click **Integrations**.

   b. In the entry for the integration that you want to start, click on the far right.

   c. In the popup, click **Start**.

2.6. CONFIRMING THAT THE TWITTER TO SALESFORCE INTEGRATION WORKS

To confirm that the Twitter to Salesforce sample integration is working, create some tweets and check for results in Salesforce.

Prerequisites

- In Fuse Online, **Running** appears next to the name that you specified for the Twitter to Salesforce sample integration when you published it.
- You can access your Twitter and Salesforce accounts.

Procedure

1. In Fuse Online in the panel on the left, click **Integrations** to see that the integration you created is a **Running** integration. If you entered the example name, you would see that **Twitter to Salesforce Sample Integration** is running.
2. Confirm that the integration does not create a contact record when a tweet does not contain the text you specified in the basic filter step:

   a. In Twitter, send a tweet that:

      - Mentions your Twitter handle
      - Does not contain the text that you specified in the basic filter step
        For example: **@Aslan #likesRedHat.**

   b. Wait for the polling interval to elapse, which can be 30 - 60 seconds.

   c. In Salesforce, confirm that there is **not** a new contact record for the name that is associated with the Twitter account that you used to tweet.

3. Confirm that the integration creates a new contact record when it should:

   a. In Twitter, send a tweet that:

      - Mentions your Twitter handle
      - Contains the text that you specified in the basic filter step

For example: **@Aslan knows #RedHatIsGreat.**

b. Wait for the polling interval to elapse.

c. In Salesforce, do the following:

i. Log in to your regular Salesforce account, not your Salesforce developer account.

ii. On your home page, under **Recent Items** you should see your new contact.

iii. Click on it to view the details.
The new contact record should have the name that is associated with the Twitter account that you used to tweet. The text of your tweet should be in the **Description** field, and your Twitter screen name should be in the **Title** field.

4. Optionally, view the integration log to troubleshoot an unexpected result or to learn more about integration execution:

a. In Fuse Online, in the left panel, click **Integrations**.

b. View your Twitter to Salesforce integration.

c. In the integration's summary page, click the **Activity** tab.

d. Click the integration execution for which you want to view activity information.

2.7. CLEANING UP YOUR INTEGRATION

When you are done working with a sample integration, you should stop it and delete it so that you can use the resources for another integration.

Prerequisites

- You are finished working with a sample integration that you published.

Procedure

1. In Fuse Online, in the left panel, click **Integrations**.
2. In the main panel, identify the entry for the sample integration that you want to stop.
3. In that entry, to the right, click and then click **Stop**.
4. Click **Stop** to confirm that you want to stop running the integration.
5. In the entry for the integration that you just stopped, to the right, click and then click **Delete**.
6. Click **Delete** to confirm that you want to delete the integration.

CHAPTER 3. IMPLEMENTING THE SALESFORCE TO DATABASE SAMPLE INTEGRATION

This sample integration captures updates in Salesforce and then calls a database stored procedure, which synchronizes that database with the Salesforce updates.

Prerequisites

- You need an account in a Salesforce installation that is used for development. This account must have Salesforce API access, which is available in a Salesforce Enterprise account or a Salesforce Developer account. To obtain a free developer account, visit https://developer.salesforce.com/signup. It takes less than two minutes to obtain a Salesforce account.
  If you already created the Twitter to Salesforce sample integration:
  - Fuse Online is already registered as a Salesforce client. You do not need to do this again.
  - You already have a Salesforce connection, which you can reuse in this sample integration.

  If you did not already create the Twitter to Salesforce sample integration, then you must register Fuse Online as a Salesforce client and create a Salesforce connection in order to complete the Salesforce to database sample integration.
- You must be logged in to your Fuse Online environment.
- You are working in a Fuse Online environment that is running in an OpenShift Container Platform project in which an administrator added the Fuse Online sample data, which provides the **PostgresDB** connection and the **To Do** app for confirming that the integration works as expected.

To implement, deploy, and test this sample integration, the main steps are:

1. Section 3.1, “Registering Fuse Online as a Salesforce client application”
2. Section 3.2, “Creating a Salesforce connection”
3. Section 3.3, “Creating and deploying the Salesforce to database sample integration”
4. Section 3.4, “Confirming that the Salesforce to database integration works”
5. Section 3.5, “Cleaning up your integration”

3.1. REGISTERING FUSE ONLINE AS A SALESFORCE CLIENT APPLICATION

In an integration, to connect to Salesforce, the first thing you must do is register your Fuse Online environment as a client application that can access Salesforce. This lets you create any number of integrations that connect to Salesforce. In other words, you need to register a particular Fuse Online environment with Salesforce only once.

In each Fuse Online environment, there can be only one registration of Fuse Online as a Salesforce client application. However, while each Salesforce connection uses the same registration, it can use different user credentials.

If you already registered Fuse Online as a Salesforce client and created a Salesforce connection, skip to Creating and deploying the Salesforce to database integration .

Prerequisite

You are logged in to Fuse Online.

Procedure

1. In Fuse Online:
   a. In the left panel, click **Settings**.
   b. On the **Settings** page, near the top, to the right of the callback URL, click to copy the callback URL for your Fuse Online environment to the clipboard. You will need this URL toward the end of this procedure.
   c. Click the **Salesforce** entry to display the **Client ID** and **Client Secret** fields.
2. In another browser tab, log in to your Salesforce account and follow the steps below to create a connected app. These instructions assume that you are using the Salesforce Classic user interface. To switch from the Salesforce Lightning Experience interface, click your profile icon and select **Switch to Salesforce Classic**. For additional information, see the Salesforce documentation for Create a Connected App .
   a. In Salesforce, in the upper right, click **Setup**.
   b. In the left panel, select **Build** > **Create** > **Apps**.
   c. Scroll down to **Connected Apps** and click **New**.
   d. Enter the required information and then select **Enable OAuth Settings**.
   e. In the **Callback URL** field, paste your Fuse Online URL, which you copied at the beginning of this procedure. For example: **https://app-proj912876.7b63.fuse-ignite.openshiftapps.com/api/v1/credentials/callback**.
   f. For **OAuth Scopes**, add:
      - **Access and manage your data (api)**
      - **Allow access to your unique identifier (openid)**
      - **Perform requests on your behalf at any time (refresh_token, offline_accesss)**
   g. Select **Configure ID token** and then **Include Standard Claims**.
   h. Scroll down and click **Save**.
   i. Scroll up to see that Salesforce indicates a short wait:

   j. Click **Continue**.

   k. Copy the consumer key that Salesforce provides.

3. Return to your Fuse Online **Settings** page and paste the Salesforce-provided consumer key into the Fuse Online Salesforce **Client ID** field.

4. Return to Salesforce and copy the consumer secret that Salesforce provides.

5. Return to your Fuse Online **Settings** page and paste the Salesforce-provided consumer secret into the Fuse Online Salesforce **Client Secret** field.

6. Click **Save**.

7. Click the **Salesforce** entry to collapse it.

3.2. CREATING A SALESFORCE CONNECTION

To create an integration that accesses data in Salesforce, you must first create a Salesforce connection. After you create a Salesforce connection, you can use it in multiple integrations.

Prerequisites

- You are logged in to Fuse Online.
- Fuse Online is open in a web browser.
- You must have already registered your Fuse Online environment as an application that can access Salesforce.
- You added the Salesforce client ID and client secret that you received after registration to the Fuse Online **Settings** page.
  If you did not already register Fuse Online, see Registering Fuse Online as a Salesforce client application.

  Be sure to wait 2 - 10 minutes after registering your Fuse Online installation as a Salesforce client before you try to create a Salesforce connection.

Procedure

1. In Fuse Online, in the left panel, click **Connections** to display available connections.

2. Click **Create Connection** to display the available connectors. A connector is a template for creating one or more connections.

3. Click the **Salesforce** connector.

4. Click **Connect Salesforce** to display a Salesforce authorization page. You might need to log in to Salesforce before you see the authorization page.
   If **Connect Salesforce** does not appear, then your Fuse Online environment is not registered as a Salesforce client application. See Registering Fuse Online as a Salesforce client application .
   When you try to create a Salesforce connection and your Fuse Online environment is not registered as a Salesforce client application, then Fuse Online displays multiple fields that prompt for authorization information. While you can create a Salesforce connection by entering values in these fields, it is not recommended.

NOTE

The following error indicates that Salesforce does not have the correct Fuse Online callback URL:

error=redirect_uri_mismatch&error_description=redirect_uri%20must%20match%20configuration

If you get this error message, then in Salesforce, ensure that the Fuse Online callback URL is specified according to the instructions in Registering Fuse Online as a Salesforce client application.

5. Click **Allow** to return to Fuse Online.
6. In the **Name** field, enter your choice of a name that helps you distinguish this connection from any other connections. For example, enter **SF Connect 1**.
7. In the **Description** field, optionally enter any information that is helpful to know about this connection. For example, enter **Sample Salesforce connection that uses my Salesforce login credentials.**
8. Click **Save** to see that the connection you created is now available. If you entered the example name, you would see that **SF Connect 1** appears as a connection that you can choose to add to an integration.

3.3. CREATING AND DEPLOYING THE SALESFORCE TO DATABASE SAMPLE INTEGRATION

To create and deploy an integration that uses the Salesforce connection that you created and the database connection that is provided with Fuse Online, the main steps are:

- Section 3.3.1, “Choosing the start connection”
- Section 3.3.2, “Choosing the finish connection”
- Section 3.3.3, “Adding a data mapping step”
- Section 3.3.4, “Giving the integration a name and deploying it”

Prerequisites

- You registered your Fuse Online environment as a Salesforce client.
- You created a Fuse Online Salesforce connection.
- Fuse Online is open and you are logged in.

3.3.1. Choosing the start connection

In Fuse Online, to create the sample Salesforce to database integration, the first task is to choose the start connection.

Prerequisites

- You created a Salesforce connection.

Procedure

1. In Fuse Online, on the left, click **Integrations**.
2. Click **Create Integration**.
3. On the **Choose a connection** page, click your Salesforce connection. If you specified the example name, you would click **SF Connect 1**.
4. On the **Choose an action** page, to the right of **On create**, click **Select**.
5. In the **Object name** field, select **Lead**.
6. Click **Next** to add the start connection to the integration.

Next step

When the integration is running, after connecting to Salesforce, the integration watches for notifications that a Salesforce **Lead** record was created. When the integration finds such a notification, it passes the new lead's data to the next step in the integration. However, before you can add the next step, you must choose the integration's finish connection.

3.3.2. Choosing the finish connection

In Fuse Online, to continue creating the Salesforce to database sample integration, after you add the start connection, you add the finish connection to the integration.

Prerequisites

- You added the Salesforce connection to the integration as the start connection.
- Fuse Online is prompting you to add the finish connection.

Procedure

1. In Fuse Online, on the **Choose a connection** page, click the **PostgresDB** connection. This integration finishes by using the credentials defined in this database connection to connect to the provided sample database.
   Note: If you do not see the **PostgreDB** connection card, your OpenShift administrator must configure Fuse Online to include the sample PostgresDB connection (and the ToDo app).
2. On the **Choose an action** page, select **Invoke stored procedure**, which passes data to a stored procedure.
3. In the **Procedure name** field, accept **add_lead**, which is the provided stored procedure to run in the sample database. The selected procedure determines the requirements for additional steps in the integration, for example, which Salesforce data fields need to be mapped to which database fields.
4. Click **Next** to add the finish connection to the integration.

3.3.3. Adding a data mapping step

To continue creating the Salesforce to database sample integration, add a data mapping step that correlates Salesforce lead fields to fields in the sample database.

Prerequisites

Prerequisites

- The integration's start connection is to Salesforce.
- The integration's finish connection is to the PostgresDB sample database.

Procedure

1. In Fuse Online, in the integration visualization, click the plus sign.
2. Click **Data Mapper** and wait a few moments. When the data fields appear, the **Sources** panel on the left displays the Salesforce fields and the **Target** panel on the right displays the database fields.
3. Map the Salesforce **Company** field to the database **company** field. On the left, in the **Sources** panel, click **Company** and drag it to the **Target** panel onto **company**.
   The data mapper displays a line from the source field to the target field.
4. Map the **Sources** (Salesforce) **Email** field to the **Target** (database) **email** field.
5. Map two Salesforce fields (**FirstName** and **LastName**) to the database **first_and_last_name** field:
   a. In the **Target** panel, click **first_and_last_name** and then click the **Create New Mapping** icon.
   b. In the **Mapping Details** panel, in the **Sources** field, select **/FirstName** and then select **/LastName**.
      When you are done you should see a line from each of the source fields to the target field.
6. Map the following Salesforce and database fields:
   - Map **Status** to **lead_status**
   - Map **Phone** to **phone**
7. In the upper right, click **Done**.

3.3.4. Giving the integration a name and deploying it

When the Salesforce to database sample integration is complete then you can deploy it and see how it works.

Prerequisites

- The integration's start connection is Salesforce.
- The integration's finish connection is to the sample database that is provided with Fuse Online.
- You just added a data mapping step to the integration.

Procedure

1. In Fuse Online, in the upper right, click **Publish** to give it a name.
2. In the **Name** field, enter a name for the integration. For example, **Salesforce to Database Sample Integration**.

3. Click **Save and publish**.
   Fuse Online starts to deploy the integration and then displays the list of integrations in this environment. The entry for your Salesforce to database integration displays a progress indicator that shows the publishing stages. Fuse Online is generating the runtime for the integration and will start it when the runtime is ready. This takes a few minutes.

   A Fuse Online account is limited to a specific number of integrations that can be running at one time. For details, see the pricing plan. If you are already running the maximum number of integrations, then you must stop an integration before you can start running another one.

4. If you are already running the maximum number of integrations, follow these steps to stop an integration:

   a. In the left panel, click **Integrations**.

   b. In the entry for the integration that you want to stop, click on the far right.

   c. In the popup, click **Stop**.

5. After stopping an integration, start another integration as follows:

   a. In the left panel, click **Integrations**.

   b. In the entry for the integration that you want to start, click on the far right.

   c. In the popup, click **Publish**.

3.4. CONFIRMING THAT THE SALESFORCE TO DATABASE INTEGRATION WORKS

To confirm that the Salesforce to database integration is working, create a new lead in Salesforce and then open the web app that Fuse Online provides for viewing updates to the sample database.

Prerequisites

- In Fuse Online, **Running** appears next to the name that you specified for the Salesforce to database sample integration when you published it.
- You can access your Salesforce account.

Procedure

1. In the left panel, click **Integrations**.
2. If necessary, wait until your sample integration is a **Running** integration. If you used the example name, you would see that **Salesforce to Database Sample Integration** is **Running**.
3. In your Salesforce installation, create a new lead. Be sure to enter data in the fields that you mapped: **Company**, **Email**, **FirstName**, **LastName**, **LeadSource**, **Status**, **Phone**, and **Rating**.
4. In a new browser window, insert **todo-** in front of the URL for your Fuse Online environment. For example: **http://todo-app-proj761432.6a63.fuse-ignite.openshiftapps.com/**.
   Your Fuse Online environment provides the To Do app, which has a REST API for accessing a database that contains tasks. In the AMQ to REST API sample integration tutorial, there are

instructions for uploading an OpenAPI document for the To Do app to create an API client connector.

5. In the **To Do App** display, you should see a notification that a new lead was created in the database.

6. Optionally, view the integration log to troubleshoot an unexpected result or to learn more about integration execution:

   a. In Fuse Online, in the left panel, click **Integrations**.

   b. View your Salesforce to database integration.

   c. In the integration's summary page, click the **Activity** tab.

   d. Click the integration execution for which you want to view activity information.

3.5. CLEANING UP YOUR INTEGRATION

When you are done working with a sample integration, you should stop it and delete it so that you can use the resources for another integration.

Prerequisites

- You are finished working with a sample integration that you published.

Procedure

1. In Fuse Online, in the left panel, click **Integrations**.

2. In the main panel, identify the entry for the sample integration that you want to stop.

3. In that entry, to the right, click and then click **Stop**.

4. Click **Stop** to confirm that you want to stop running the integration.

5. In the entry for the integration that you just stopped, to the right, click and then click **Delete**.

6. Click **Delete** to confirm that you want to delete the integration.

CHAPTER 4. IMPLEMENTING THE AMQ TO REST API SAMPLE INTEGRATION

This sample integration connects to a Red Hat AMQ broker to obtain item delivery records for a hypothetical enterprise. The integration then executes a custom step that operates on the records to identify any items that were damaged when they were received. After a simple data mapping, the integration connects to a REST API to obtain contact information for vendors of damaged items.

The other sample integrations use connectors and data operations that are built into Fuse Online. This integration also does that, but in addition, it provides instructions for customizing and extending Fuse Online by leading you through the procedures for:

- Adding a custom data operation by uploading an extension.
- Adding a custom REST API client connector by uploading an OpenAPI document.

Fuse Online provides the extension file and the OpenAPI document.

Prerequisites

- You must be logged in to Fuse Online.
- You are working in a Fuse Online environment that is running in an OpenShift Container Platform project in which an administrator added the Fuse Online sample data, which provides the sample **PostgresDB** connection and the **To Do** app for confirming that the integration works as expected.

To implement the AMQ to REST API sample integration, the main steps are:

1. Section 4.1, “Creating an AMQ connection”
2. Section 4.2, “Making a custom step available”
3. Section 4.3, “Creating a REST API connector”
4. Section 4.4, “Creating a REST API connection”
5. Section 4.5, “Creating and deploying the AMQ to REST API sample integration”
6. Section 4.6, “Confirming that the AMQ to REST API integration works”
7. Section 4.7, “Cleaning up your integration”

4.1. CREATING AN AMQ CONNECTION

The AMQ to REST API sample integration starts by connecting to an AMQ broker (Red Hat AMQ) that is provided in your OpenShift project. Before you start to create the integration itself, you must start the broker and create a connection to that broker.

Procedure

1. Verify that the broker has started:
   a. In a browser, go to your OpenShift web console.

b. In the console, click **Project**.

c. On the **Overview** page, in the **Inventory** section, click **Services**.

d. Click **broker-amq-tcp** and then click **Pods**. The status of the pod should be **Running**.

2. Create the AMQ connection:

a. In Fuse Online, in the left panel, click **Connections** to display any available connections.

b. Click **Create Connection** to display Fuse Online connectors.

c. Click the **Red Hat AMQ** connector.

d. Configure the connection by entering:

i. In the **Broker URL** field, enter **tcp://broker-amq-tcp:61616** as the location to obtain data from.

ii. In the **User name** field, enter **amq** as the user name for the account that accesses this AMQ broker.

iii. In the **Password** field, enter **topSecret** as the password for the account that accesses this AMQ broker.

iv. Leave the other fields blank.

e. Click **Validate**. Fuse Online immediately tries to validate the connection and displays a message that indicates whether validation is successful. If validation fails, check the values you entered and try again.

f. When validation is successful, click **Next**.

g. In the **Name** field, enter your choice of a name that helps you distinguish this connection from any other connections. For example, enter **Red Hat AMQ Broker 1**.

h. In the **Description** field, optionally enter any information that is helpful to know about this connection. For example, enter **Connection to the provided Red Hat AMQ message broker.**

i. Click **Save** to see that the connection you created is now available. If you entered the example name, you would see that **Red Hat AMQ Broker 1**is now available.

4.2. MAKING A CUSTOM STEP AVAILABLE

Fuse Online provides a number of steps that operate on integration data between connections. If Fuse Online does not provide a between-connections step that meets your need, a developer can code an extension that defines one or more custom steps that operate on data between connections. The developer gives you a **.jar** file that contains the extension. You then upload the extension in Fuse Online to make the custom step(s) available for use in integrations.

The AMQ to REST API sample integration uses a custom step that operates on data between connections to identify items that were damaged when they were received.

Procedure

1. In a new browser tab, go to https://github.com/syndesisio/fuse-online-sample-extension/releases.
2. Download the **Damage Reporter** extension's **.jar** file.
3. In Fuse Online, in the left panel, click **Customizations** > **Extensions**.
4. Click **Import Extension**.
5. Click in the dotted-line box and select the downloaded **.jar** file that contains the extension. Fuse Online validates the file, extracts and displays the extension's ID, name, description, and type, and lists **Damage Reporter** as the custom step that the extension defines.
6. Click **Import Extension**. Fuse Online makes the custom step available and displays the list of extensions that have been imported.

Additional resources

For information about coding an extension and creating its **.jar** file, see:

- Tooling User Guide - Use Fuse tooling to develop an extension.
- Integrating Applications with Fuse Online - Manually code an extension.

4.3. CREATING A REST API CONNECTOR

Fuse Online can create connectors for REST APIs that support Hypertext Transfer Protocol (HTTP)/1.0 or HTTP/1.1. To do this, Fuse Online requires a valid OpenAPI 3 (or 2) document that describes a REST API that you want to connect to.

Your Fuse Online environment provides the To Do app, which has a REST API for accessing a database that contains tasks. Your environment also provides an OpenAPI document for this API.

Procedure

1. Download the icon for the **todo app**:
   a. In the Fuse Online navigation panel, click **Home**.
   b. Copy the URL into a text editor.
   c. At the beginning of the URL, insert **todo-**.
   d. At the end of the URL, add **/images/todo_icon.png**.
   e. Use the **http** scheme instead of **https**.
   The result is something like this: http://todo-app-proj217402.6a63.fuse-ignite.openshiftapps.com/images/todo_icon.png
   f. Paste this URL into a new browser window and download the **todo_icon.png** file to a location on your file system. You will upload this icon in Step 11.
2. Identify the URL for your Fuse Online environment's copy of the OpenAPI document:
   a. In the Fuse Online navigation panel, click **Home**.
   b. Copy the URL into a text editor.

c. At the beginning of the URL, insert **todo-**.

d. At the end of the URL, add **openapi.json**.

e. Use the **http** scheme instead of **https**.
The result is something like this: **http://todo-app-proj217402.6a63.fuse-ignite.openshiftapps.com/openapi.json**

NOTE

Specification of **http** rather than **https** avoids a runtime error if TLS certificates are not valid. In production environments, ensure that valid certificates are in place, and always specify secure URLs (**https**) to obtain an OpenAPI document.

3. In the Fuse Online navigation panel, click **Customizations** > **API Client Connectors**.

4. Click **Create API Connector**.

5. Select **Use a URL**.

6. In the input box, paste the URL for your OpenAPI document and click **Next**.

7. On the **Review Actions** page, click **Next**. If you see a warning, you can ignore it.

8. Click **Next**.

9. On the **Specify Security** page, accept **HTTP Basic Authentication** and specify a username and password, such as **admin** and **admin**. Note that, for this sample app, the username and password are not verified.

10. Click **Next**.

11. On the **Todo App API** summary page:

    a. For the **Connector Icon**, click **Choose File** and then navigate to the location of the **todo_icon.png** that you downloaded in Step 1.

    b. If you want to, you can change the values in the **Name** and **Description** fields.

    c. In the **Host** field, accept the name of the service host, which is something like this: **http://todo-app-proj217402.6a63.fuse-ignite.openshiftapps.com**
    If necessary, change **\https:** to **\http:**

    d. In the **Base URL** field, accept the part of the URL that follows the host name in service requests: **/api**.

12. Click **Save**.
Fuse Online displays the **API Client Connectors**. There is a new entry for the **Todo App API** that you just created.

4.4. CREATING A REST API CONNECTION

In an integration, before you can connect to a REST API, you create a REST API client connector and then use that connector to create a connection. You already created a REST API connector for the To Do app. Follow the instructions here to use that connector to create a connection to the To Do app REST API.

Prerequisite

- You created the Todo App REST API connector.

Procedure

1. In Fuse Online, in the left panel, click **Connections** to display any available connections.
2. Click **Create Connection** to display available connectors.
3. Click the **Todo App API** connector that you just created.
   Fuse Online populates the **Host** and **Base Path** fields from the OpenAPI document that you provided when you created the connector.
4. In the **Username** field, enter any value. For this sample integration, user name and password values are required but they are not used.
5. In the **Password** field, enter any value.
6. Click **Next**.
7. In the **Name** field, enter your choice of a name that helps you distinguish this connection from any other connections. For example, enter **Todo App API Client**.
8. In the **Description** field, optionally enter any information that is helpful to know about this connection. For example, enter **Connection to the provided Todo app REST API.**
9. Click **Save** to see that the connection you created is now available.

4.5. CREATING AND DEPLOYING THE AMQ TO REST API SAMPLE INTEGRATION

To create and deploy the AMQ to REST API sample integration, the main steps are:

1. Section 4.5.1, “Choosing the start connection”
2. Section 4.5.2, “Choosing the finish connection”
3. Section 4.5.3, “Adding a damage reporter step”
4. Section 4.5.4, “Adding a data mapping step”
5. Section 4.5.5, “Giving the integration a name and deploying it”

Prerequisites

- You created a connection to the provided Red Hat AMQ broker.
- You created an API Client connection to the provided Todo app.
- You uploaded the extension that provides the Damage Reporter step.

4.5.1. Choosing the start connection

In Fuse Online, to create the sample AMQ to REST API sample integration, the first task is to choose the start connection.

Prerequisites

- You started the provided Red Hat AMQ broker.
- You created a connection to that message broker.

Procedure

1. In Fuse Online, on the left, click **Integrations**.
2. Click **Create Integration**.
3. On the **Choose a connection** page, click your AMQ connection. If you specified the example name, you would click **Red Hat AMQ Broker 1**
4. On the **Choose an action** page, select the **Subscribe for messages** action to receive messages from the queue you specify.
5. In the **Destination name** field, enter **inventoryReceived** for the name of the queue to obtain data from.
6. Click in the **Destination type** field and select **Queue**.
7. Leave the other fields blank.
8. Click **Next**. Fuse Online prompts you to specify the output data type. This is not needed for this sample integration.
9. Click **Next** to add the start connection to the integration.

Next step

When the integration is running, after connecting to Red Hat AMQ, the integration watches for messages on the **inventoryReceived** queue. When a message is available, the integration passes it to the **Damage Reporter** step. However, before you can add that step to the integration, you must choose the integration's finish connection.

4.5.2. Choosing the finish connection

In Fuse Online, to continue creating the AMQ to REST API sample integration, after you add the start connection, you add the finish connection to the integration.

Prerequisites

- You uploaded the provided OpenAPI document to create the Todo App API connector.
- You used the Todo App API connector to create a Todo App API connection.

Procedure

1. In Fuse Online, on the **Choose a connection** page, click the To Do app connection that you created. If you assigned the example name, you would click **Todo App API Client**
2. On the **Choose an action** page, select **Create new task**, which provides information about who to contact to address a particular damaged item.
3. Click **Next** to add the finish connection to the integration.

4.5.3. Adding a damage reporter step

With the start and finish connections in place, you are ready to add the custom step that receives the messages from the Red Hat AMQ broker and identifies any items that were damaged when they were received.

Prerequisite

- You uploaded the extension that provides the Damage Reporter custom step.
- You added the start and finish connections to the integration.

Procedure

1. In Fuse Online, in the integration visualization, click the plus sign.
2. Click **Damage Reporter**.
3. Click **Next** to add the Damage Reporter step to the integration.

   Note: If a Data Type Mismatch warning icon appears next to the Damage Reporter step, you can ignore it.

4.5.4. Adding a data mapping step

To continue creating the AMQ to REST API sample integration, you need to add a data mapping step. This step correlates the **task** field in the output from the damage reporter step to the **task** field in the database that the REST API accesses.

Prerequisite

- You added the Damage Reporter step to the integration.

Procedure

1. In Fuse Online, in the integration visualization, click the plus sign that is between the Damage Reporter step and the finish connection.
2. Click **Data Mapper**. In the data mapper, the **Source** panel on the left displays the fields in the output from the damage reporter step. The **Target** panel on the right displays the fields in the database that the API accesses.
3. In the **Source** panel, click the **task** field and then click the **Create New Mapping** icon. The **Mapping Details** panel opens.
4. In the **Mapping Details** target panel, under **Targets**, select **/body/task**.
5. In the upper right, click **Done**.

Result

The integration is complete and it is ready to be published.

If you see a Data Type Mismatch warning icon, you can ignore it.

4.5.5. Giving the integration a name and deploying it

The AMQ to REST API sample integration is complete when it has a Red Hat AMQ start connection, a Damage Reporter step, a data mapper step, and it finishes with a Todo App Client API connection. Follow the instructions here to deploy it.

Prerequisites

- You added the start and finish connections to the integration.
- You added a Damager Reporter step between the start and finish connections.
- You added a data mapper step between the Damage Reporter step and the connection to the Todo App API.

Procedure

1. In Fuse Online, in the upper right, click **Publish**.
2. In the **Name** field, enter a name for the integration. For example, **AMQ to REST API Sample Integration**.
3. Optionally, in the **Description** field, enter information that might be helpful to know about this integration.
4. In the upper right corner, click **Save and publish**.
   Fuse Online starts to deploy the integration and then displays the list of integrations in this environment. In the entry for your AMQ to REST API integration, you can see a progress indicator that shows the publishing stages. Fuse Online is generating the runtime for the integration and will start it when the runtime is ready. This takes a few minutes.

   A Fuse Online account is limited to a specific number of integrations that can be running at one time. For details, see the pricing plan. If you are already running the maximum number of integrations, then you must stop an integration before you can start running another one.
5. If you are already running the maximum number of integrations, follow these steps to stop an integration:
   a. In the left panel, click **Integrations**.
   b. In the entry for the integration that you want to stop, click on the far right.
   c. In the popup, click **Stop**.
6. After stopping an integration, start another integration as follows:
   a. In the left panel, click **Integrations**.
   b. In the entry for the integration that you want to start, click on the far right.
   c. In the popup, click **Start**.

4.6. CONFIRMING THAT THE AMQ TO REST API INTEGRATION WORKS

After you create and publish the AMQ to REST API sample integration, you can confirm that it works as defined.

Prerequisite

In Fuse Online, in the list of integrations, **Running** appears next to the AMQ to REST API integration that you created and deployed.

Procedure

1. In a new browser window, go to the To Do app display by inserting **todo-** in front of the URL for your Fuse Online environment. For example: **http://todo-app-proj761432.6a63.fuse-ignite.openshiftapps.com**/.

2. In the To Do app display, click **Show JMS Form** to display an input box that contains an XML message.

3. Click **Send JMS Message** to send that message to the Red Hat AMQ broker in your OpenShift project.
   Successful execution returns a task from the To Do app client API. The task identifies the ID of the damaged item and the contact information for its vendor. If the task does not appear in a moment or two, try reloading the page.

4. Edit the XML message to specify two damaged items:

   a. Click **Show JMS Form** to display the message input box again.

   b. In the XML message, change the entry for the undamaged item to specify **damaged="true"**.

   c. Click **Send JMS Message**. The To Do app client API returns a new task that contains IDs for two damaged items and contact information for the two vendors.

5. Edit the XML message to specify an ID that you make up:

   a. Click **Show JMS Form**.

   b. In the XML message, for the item that has **damaged="true"**, change the item ID, for example, to **1234**.

   c. Click **Send JMS Message**. The To Do app client API returns a new task with the item ID that you just entered.

6. Optionally, view the integration log to troubleshoot an unexpected result or to learn more about integration execution:

   a. In Fuse Online, in the left panel, click **Integrations**.

   b. View the entry for your AMQ to REST API integration.

   c. In the integration's summary page, click the **Activity** tab.

   d. Click the integration execution for which you want to view activity information.

4.7. CLEANING UP YOUR INTEGRATION

When you are done working with a sample integration, you should stop it and delete it so that you can use the resources for another integration.

Prerequisites

- You are finished working with a sample integration that you published.

Procedure

1. In Fuse Online, in the left panel, click **Integrations**.
2. In the main panel, identify the entry for the sample integration that you want to stop.
3. In that entry, to the right, click and then click **Stop**.
4. Click **Stop** to confirm that you want to stop running the integration.
5. In the entry for the integration that you just stopped, to the right, click and then click **Delete**.
6. Click **Delete** to confirm that you want to delete the integration.