



## **Red Hat CloudForms 4.6**

# **Service Provisioning in CloudForms Using an Orchestration Template**

How to create a service in CloudForms using an orchestration template



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## Abstract

This workflow example demonstrates how to create a service catalog in Red Hat CloudForms for provisioning virtual machine instances using an AWS CloudFormation orchestration template. If you have a suggestion for improving this guide or have found an error, please submit a Bugzilla report at <http://bugzilla.redhat.com> against Red Hat CloudForms Management Engine for the Documentation component. Please provide specific details, such as the section number, guide name, and CloudForms version so we can easily locate the content.

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## 1. OVERVIEW

Cloud orchestration is a service that allows you to create, update, and manage cloud resources and their software components as a single unit and then deploy them in an automated, repeatable way through a template. The deployed virtual machine instances and associated collection of resources are referred to as stack. Red Hat CloudForms supports a number of orchestration template types, including Amazon CloudFormation and OpenStack Heat, that make deploying complex services easier in the cloud.

In the following example workflow, you will create an orchestration template, and add it as a catalog item to a service catalog. You can then create an orchestration stack from the template, and launch the stack from the catalog using a service dialog.

## 2. CREATING AN ORCHESTRATION TEMPLATE



Complete the following procedure to create a new orchestration template.

1. Navigate to **Services** → **Catalogs** and select **Orchestration Templates** in the accordion menu.
2. Click  **Configuration**, then click  **Create a new Orchestration Template**.
3. Enter a **Name** and **Description** for your template.
4. Select **Amazon CloudFormation** from the **Template Type** list.
5. Select **Draft** to create a draft template.
6. Add your template in the area below for the selected **Template Type**. You can author your own stack template, or you can copy and paste from an existing text file.
7. Click **Add**.

Next, create a service dialog from the orchestration template.



## 3. CREATING A SERVICE DIALOG FROM AN ORCHESTRATION TEMPLATE

Complete the following procedure to create a service dialog based on the input parameters defined in the orchestration template.

1. Navigate to **Services** → **Catalogs** and click **Orchestration Templates** in the accordion menu.
2. Expand **All Orchestration Templates**, then click the orchestration template you created in [Section 2, “Creating an Orchestration Template”](#) to create a service dialog from it.
3. Click  **Configuration**, then click  **Create Service Dialog from Orchestration Template**.
4. Enter a name for the service dialog in **Service Dialog Name**.
5. Click **Save**.

## 4. CREATING AN ORCHESTRATION CATALOG ITEM



Complete the following procedure to create a new catalog item from the orchestration template you created in [Section 2, “Creating an Orchestration Template”](#).

1. Navigate to **Services** → **Catalogs** and select **Catalog Items** in the accordion menu.
2. Click  **Configuration**, then click  **Add a New Catalog Item**.
3. Select **Orchestration** from the **Catalog Item Type** list.
4. Enter the basic details in the **Basic Info**:
  - a. Enter a **Name** and **Description** for the new service catalog item.
  - b. Select **Display in Catalog** box.
  - c. Select the appropriate catalog from the **Catalog** list.
  - d. Select the appropriate dialog from the **Dialog** list.
  - e. Select the orchestration template you created in [Section 2, “Creating an Orchestration Template”](#) from the **Orchestration Template** list.
  - f. Select **Amazon** from the **Provider** list.
5. Click **Add**.

Next, assign the catalog item to a new service catalog.

## 5. CREATING A CATALOG

Complete the following procedure to create a new catalog, and assign the catalog item you created in [Section 4, “Creating an Orchestration Catalog Item”](#).

1. Navigate to **Services** → **Catalogs** and select **Catalogs** in the accordion menu.
2. Click  **Configuration**, then click  **Add a New Catalog**.
3. In **Basic Info**, add **Name** and **Description** for the new catalog.
4. Under **Assign Catalog Items**, select the catalog item you created in [Section 4, “Creating an Orchestration Catalog Item”](#) from the **Unassigned** box, then move it to the **Selected** box.
5. Click **Add**.

## 6. ORDERING A SERVICE

Complete the following procedure to order catalog items from the service catalog.

1. Navigate to **Services** → **Catalogs** and select **Service Catalogs** in the accordion menu.
2. From **All Services**, select the catalog and the services (catalog items) that you want to order from your catalog, then click **Order**. You will see the **Order Service** window with **Options** and **Parameters**.






3. Enter a name for the stack in **Stack Name**.
4. From the **On Failure** list, select what to do if stack creation fails. The default is **Rollback**.
5. Optional: Enter **Timeout** in minutes.
6. Set the remaining options as needed that will vary depending on the dialog.
7. Click **Submit**.

You have now submitted your service provisioning request. Once a request has been approved, the various stages of fulfillment will be processed. You can monitor the request status and other details in **Services** → **Requests**.

## 7. ORCHESTRATION STACKS

1. Once the status of the provisioning request in **Services** → **Requests** is **Finished**, click **Compute** → **Clouds** → **Stacks** to see the deployed stack.
2. Click the stack to see a summary of its properties, resources, among other details, including the running instances that are part of the stack.

Orchestration Stacks

| <input type="checkbox"/> (Check All) Asc. by: Name |   |            |          |                     |               |                                     |           |                 |                |
|--|---|------------|----------|---------------------|---------------|-------------------------------------|-----------|-----------------|----------------|
|  |   | Name ^     | Provider | Type                | Status        | Status Reason                       | Instances | Security Groups | Cloud Networks |
| <input type="checkbox"/>                           |  | BGMT3Az8Kn | ec2-east | OrchestrationStackA | ROLLBACK_COMP |                                     | 0         | 0               | 0              |
| <input type="checkbox"/>                           |  | bill528    | qblade38 | OrchestrationStackC | CREATE_COMPLE | Stack create completed successfully | 1         | 0               | 0              |
| <input checked="" type="checkbox"/>                |  | heat-stack | qblade38 | OrchestrationStackC | CREATE_COMPLE | Stack create completed successfully | 1         | 0               | 0              |
| <input type="checkbox"/>                           |  | newstack   | ec2-east | OrchestrationStackA | CREATE_COMPLE |                                     | 0         | 1               | 0              |
| <input type="checkbox"/>                           |  | rhos_stack | qblade38 | OrchestrationStackC | CREATE_COMPLE | Stack create completed successfully | 1         | 0               | 0              |

You have now deployed instances and associated collection of resources (referred to as a stack) using an orchestration template.