



Red Hat CloudForms 5.0

Creating a Service in CloudForms for Virtual Machine Provisioning

How to create a service in Red Hat CloudForms for provisioning a Red Hat Virtualization virtual machine

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Red Hat CloudForms Documentation Team
cloudforms-docs@redhat.com

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Abstract

This workflow example demonstrates how to create a service in Red Hat CloudForms for virtual machine provisioning using the Self Service user interface. 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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CHAPTER 1. OVERVIEW

Red Hat CloudForms provides the ability to define services, which can include one or more virtual machines or instances, and can be deployed across hybrid environments. Services can be made available to users through the Self Service user interface, allowing users to order predefined IT services without IT operations getting involved.

The following three items are required to make a service available to users from the CloudForms Self Service user interface:

1. **Service Dialog:** A service dialog is where you allow users to configure virtual machine or instance options. A service dialog determines which options users get to change. You can choose the options presented to the user, from setting the service name to changing all provisioning dialog options.
2. **Service Catalog:** A service catalog is used to group service dialogs together.
3. **Service Catalog Item:** A service catalog item is the actual service which combines a service dialog with a provisioning dialog.

CHAPTER 2. EXAMINING THE PROVISIONING DIALOG

Understanding provisioning dialogs is important when working with services in CloudForms. Every provider in CloudForms comes with a sample provisioning dialog covering the options specific to that provider. The process begins with the provisioning dialog, which presents the basic configuration options for a virtual machine or instance. The options presented are dependent on the provider you are using. For instance, a cloud provider might have flavors of instances, whereas an infrastructure provider might allow you to set the memory size or number of CPUs on a virtual machine.

To see the sample provisioning dialog for Red Hat Virtualization:

1. Navigate to **Automation → Automate → Customization**.
2. Expand the **Provisioning Dialogs** accordion and select **Sample RedHat VM Provisioning Dialog** under **VM Provision**.

This is a textual representation of the dialog you will get when you provision a virtual machine.

CHAPTER 3. CREATING A SERVICE DIALOG

Using a service dialog you can determine which options users get to change. When users access a service, the majority of options available to them are preset and cannot be altered. A service dialog exposes some of those options to the user so that even if they are ordering a basic RHEL 7 machine, for example, they can at least choose the amount of memory, virtual CPUs, or other options available to the instance they order. In cases where certain fields must be unique, such as the name of virtual machines in Red Hat Virtualization, users must enter their own unique name for the virtual machine they choose or the operation will fail, so this field must be exposed.



NOTE

A service requires an assigned service dialog, regardless of exposing details to user. A simple service dialog with a **Submit** and **Cancel** button is required at minimum.

A service dialog contains three components:





- One or more **Tabs**.
- Inside the tabs, one or more **Sections**. Note that in the previous method of creating a service dialog using the CloudForms user interface, **Sections** were referred to as **Boxes**.
- Inside the sections, one or more **Elements**. Elements are controls that accept input. Elements contain methods, like check boxes, drop-down lists or text fields, to fill in the options on the provisioning dialog.





IMPORTANT

The names of the elements must correspond to the options used in the provisioning dialog.


The following procedure outlines how to create a service dialog for your sample service:

1. Navigate to **Automation** → **Automate** → **Customization**.
2. Click the **Service Dialogs** accordion.
3. Click  (**Configuration**), and then  (**Add a new Dialog**).
4. Enter basic information for your dialog under **General**:
 - a. Enter **Provision RHV VM** in **Dialog's name**, and enter a description for the dialog in **Dialog's description**.
5. Add a new tab to the dialog:
 - a. Click  **Create Tab**. Then, click the  icon on the new tab to edit tab information.
 - b. Enter **General** in **Label**.
 - c. Optional: Enter a description for the tab in **Description**.
 - d. Click **Save**.


6. Add a new section to the tab:

- a. Click  **Add Section**. Then, click the  icon on the upper-right to edit section details.
- b. Enter **Service and VM Name** in **Label**.
- c. Optional: Enter a description for the section in **Description**.
- d. Click **Save**.


7. Add a **Text Box** element to the section for the service name:

- a. From the list of elements on the left, click the **Text Box** element, then drag-and-drop it inside the section. Then, click the  icon next to the element to edit its field details.
- b. Enter **Service Name** in **Label**.
- c. Enter **service_name** in **Name**.
- d. Click **Options**, then select **String** from the **Value Type** list.
- e. Click **Save**.

8. Add a **Text Box** element to the section for the virtual machine name:



- a. From the list of elements on the left, click the **Text Box** element, then drag-and-drop it inside the section. Then, click the  icon next to the element to edit its field details.
- b. Enter **VM Name** in **Label**.
- c. Enter **vm_name** in **Name**.
- d. Click **Options**, then select **String** from the **Value Type** list.
- e. Click **Save**.

9. Add a **Text Box** element to the section for the virtual machine description:

- a. From the list of elements on the left, click the **Text Box** element, then drag-and-drop it inside the section. Then, click the  icon next to the element to edit its field details.
- b. Enter **VM Description** in **Label**.
- c. Enter **vm_description** in **Name**.
- d. Click **Options**, then select **String** from the **Value Type** list.
- e. Click **Save**.

10. Add a new section to the tab:



- a. Click  **Add Section**. Then, click the  icon on the upper-right to edit section details.
- b. Enter **VM Characteristics** in **Label**.

- c. Optional: Enter a description for the section in **Description**.
 - d. Click **Save**.
11. Add a **Dropdown** element to the section for the number of CPUs:
 - a. From the list of elements on the left, click the **Dropdown** element, then drag-and-drop it inside the section. Then, click the  icon next to the element to edit its field details.
 - b. Enter **Number of CPUs** in **Label**.
 - c. Enter **option_0_cores_per_socket** in **Name**.
 - d. Click **Options**. Next to **Entries**, click + to add individual entries for the values **1, 2, and 4**, and their description.
 - e. Click **Save**.
12. Add a **Dropdown** element to the section for the virtual machine memory:
 - a. From the list of elements on the left, click the **Dropdown** element, then drag-and-drop it inside the section.
 - b. Click the  icon next to the element to edit its field details.
 - c. Enter **VM Memory** in **Label**.
 - d. Enter **option_0_vm_memory** in **Name**.
 - e. Click **Options**. Next to **Entries**, click + to add individual entries for the values **1024, 2048, and 4096** and their description.
 - f. Click **Save**.
13. Click **Save** to save the dialog.

Your service dialog is now added in the **Service Dialogs** accordion.

CHAPTER 4. CREATING A CATALOG ITEM

Create a service catalog item to represent that service in a catalog.

1. Navigate to **Services** → **Catalog**.
2. Click the **Catalog Items** accordion.
3. Click  (**Configuration**), and then  (**Add a new Catalog Item**).
4. Select **RHEV** from the **Catalog Item Type** list.
5. Enter the basic details in the Basic Info tab:
 - a. Enter a name for the catalog item in **Name**.
 - b. Enter a description for the catalog item in **Description**.
 - c. Select **Display in Catalog**.
 - d. Select the catalog you created from the **Catalog** list.
 - e. Select the service dialog you created from the **Dialog** list.
6. Click the **Details** tab:
 - a. Enter a description of the catalog item using HTML tags.
7. Click the **Request Info** tab to enter the request details. Enter the same data you did in the traditional provisioning dialog.
 - a. In the **Catalog** tab, select the template on which to base the virtual machine from the **Selected VM** area.
 - b. Enter **changeme** as the default name of the virtual machine in **VM Name**.
 - c. In the Network tab, select **rhevm** from the **vLan** list.
8. Click **Add**.



NOTE

In CloudForms, service catalog items can be more complex than a single virtual machine and are provisioned through a series of automation workflows. The service dialog you created will be used to gather information from the user requesting the virtual machine, hiding all the complexity of the details needed to actually deploy any of the components.

You can now provision a virtual machine through Red Hat Virtualization using the Self Service user interface.

CHAPTER 5. PROVISIONING A VIRTUAL MACHINE USING THE SELF SERVICE USER INTERFACE

1. Log in to the Self Service User Interface at https://<your_cloudforms_appliance>/self_service.
2. Click the **Service Catalog** tab.
3. Click the service you created.
4. In the **Service and VM Name**
 - a. Enter the service name in **Service Name**.
 - b. Enter the virtual machine name in **VM Name**.
 - c. Enter the virtual machine description in **VM Description**.
5. In **VM Characteristics**, enter **Number of CPUs** and **VM Memory**.
6. Click **Add to Shopping Cart** and access the shopping cart by clicking its icon on the upper-right corner of the screen.
7. Click **Order**.

You have ordered a new provisioning request. You can follow its progress and see additional details of the order request by selecting it from the **Orders** tab.

Also, see the [Self Service User Interface Guide](#) for more information about using the Self Service user interface.

Summary

As part of the above sample service, you created a provisioning dialog that defines the options that can be set on a virtual machine. Then, you created a service dialog which allows us to expose certain options to be set by the user. For our example, the service name, virtual machine name, virtual machine description, and virtual machine characteristics are configurable. Additionally, you created a service catalog and finally a catalog item. The catalog item combines the service dialog with all of the options in the provisioning dialog. Lastly, you provisioned a Red Hat Virtualization virtual machine using the Self Service user interface.