



# **Red Hat CloudForms 4.6**

## **Integration with ServiceNow**

Integrating ServiceNow CMDB with Red Hat CloudForms



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Integrating ServiceNow CMDB with Red Hat CloudForms

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## Abstract

This guide provides instructions for using the CloudForms Management Engine features relevant to non-administrative users. It establishes basic system and operational concepts through task-based scenarios and examples. 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. Integration with ServiceNow CMDB is available as a technology preview in this release of Red Hat CloudForms. For more information on the support scope for features marked as technology previews, see Technology Preview Features Support Scope.

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## 1. OVERVIEW

Red Hat CloudForms integration with ServiceNow enables authentication with an existing ServiceNow database and **add/amend** items in the ServiceNow database during state machine processing, such as the virtual machine provisioning state machine. Note that information in this guide assumes you have credentials and access to a ServiceNow database instance.

The following new namespace and class delivers support for the management of **ServiceNow Configuration Management Database (CMDB)** records using **ServiceNow's RESTful** web service.

```
/RedHat/Integration/ServiceNow/CMDB
```

You can manage records in the **CMDB\_CI\_SERVER** table, including **create**, **update**, and/or **delete**. The following methods are included:

Method	Action
create	Create record in specified ServiceNow table.
delete	Delete record in specified ServiceNow table.
get	Get record from specified ServiceNow table and list its attributes.
get_all	Get all records in ServiceNow and list attributes.
update	Get specified record, update required attributes and post updated record.
update_patch	Post required attributes to specified record.



### NOTE

Configuration item (CI) and record are used interchangeably and refer to items in a ServiceNow database table.

## 2. CONFIGURING SERVICENOW CONNECTION

Configure the connection to the ServiceNow database by specifying the credentials in the **CMDB schema** or instances within.

The following methods are included:

snow_server	ServiceNow database IP address or resolvable hostname.
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snow_user	ServiceNow user account with the necessary permissions.
snow_password	Associated user account password.

The table name cannot be changed unless there is a specific requirement to manage records elsewhere. Entries in this table appear in the **Configuration** → **Base Items** → **Servers** menu in the ServiceNow web user interface.

table_name	ServiceNow cmdb_ci_server database table.
------------	---

## 3. MANAGING RECORD ATTRIBUTES

You can specify any attribute via the **URI** or **CMDB** class instance. If neither exists, the value is determined from the Red Hat CloudForms **VM** or **miq\_provision** objects.

The attributes can be reduced or extended as required by amending the Ruby methods.



### NOTE

Some attributes are not free-text (variable) fields, that is, they must be specific values. For example, the **vendor** value must already exist in the ServiceNow Vendor table beforehand.

### 3.1. Create and Update (\_patch) Record

You can use the following attributes when creating and/or updating a record.

#### 3.1.1. Attribute

Attribute	Value
virtual	Boolean true or false, set to true.
name VMs	Virtual infrastructure name.
short_description	Red Hat CloudForms virtual machine GUID.
host_name	The virtual machine's operating system hostname.
cpu_count	The virtual machine's CPU count.
ram	The virtual machine's memory.
vendor	The virtual machine's hardware vendor (provider).
sys_id [a]	ServiceNow record unique system ID.

[a] `sys_id` attribute is not required during **create**. Its value is returned from the **create** request and the Red Hat CloudForms object custom attribute `servicenow_sys_id` is created and updated.

### 3.2. Get and Delete Record

You can use the following attribute for getting or deleting a record.

Attribute	Value
<code>sys_id</code>	ServiceNow record unique system ID.

### 3.3. Get All Records

There are no attributes required to get all records. This method gets all records in the specified **ServiceNow table** and writes their attributes to `automation.log`.

## 4. USE CASES

The following examples show how ServiceNow can be integrated with automation workflows.

### 4.1. Provisioning a Virtual Machine from a Template

The Cloud and Infrastructure **Provision VM from Template** State Machines contain **RegisterCMDB** and **ActivateCMDB** states.

To create a new ServiceNow record during virtual machine provisioning, amend the **ActiveCMDB** state to call the **create** method, for example:

```
/Integration/ServiceNow/CMDB/create
```


 ActivateCMDB	/Integration/ServiceNow/CMDB/create
--	-------------------------------------

### 4.2. Virtual Machine Retirement

The Cloud and Infrastructure default **Retirement** State Machines contain the **DeactivateCMDB** state.

To update a virtual machine's ServiceNow record during virtual machine retirement, amend the **DeactivateCMDB** state to call the **update\_patch** method, for example:

```
Integration/ServiceNow/CMDB/update_patch?
description=VM%20${/#vm.guid}%20retired%20from%20{productname_short}
```

 DeactivateCMDB	/Integration/ServiceNow/CMDB/update_patch?description=VM%20\${/#vm.guid}%20retired%20from%20CloudForms
--	--




### 4.3. Virtual Machine Reconfiguration (VMware Only)

Create a new **System Event** instance to update the ServiceNow record after a virtual machine reconfiguration request has been approved and completed.

Create a new **/System/Event/ReconfigVM\_Task\_Complete** instance with a relationship value:

/Integration/ServiceNow/CMDB/update\_patch

 ✓ rel1	/Integration/ServiceNow/CMDB/update_patch
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