Red Hat Software Certification 8.72 Red Hat OpenStack Application and VNF Workflow Guide

For Use with Red Hat OpenStack 17
Abstract

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Red Hat is committed to replacing problematic language in our code and documentation. We are beginning with these four terms: master, slave, blacklist, and whitelist. Due to the enormity of this endeavor, these changes will be gradually implemented over upcoming releases. For more details on making our language more inclusive, see our CTO Chris Wright’s message.
CHAPTER 1. INTRODUCTION TO OPENSTACK APPLICATION AND VNF CERTIFICATION PROGRAM

Use this guide to certify your own applications, management applications or Virtualized Network Function (VNF) software for use with Red Hat OpenStack Platform (RHOSP) in a jointly supported customer environment.

1.1. THE RED HAT CERTIFICATION PROGRAM OVERVIEW

The Red Hat certification program ensures the compatibility of your hardware, software, and cloud products on the OpenStack Platform. The program has three main elements:

- **Test suite**: Comprises tests for hardware or software applications undergoing certification.
- **Red Hat Certification Ecosystem**: Helps to explore and find certified products including hardware, software, cloud, and service providers.
- **Support**: A joint support relationship between you and Red Hat.

1.2. CERTIFICATION WORKFLOW

Follow these high-level steps to certify your hardware, software, and cloud products:

1. Create a certification request for a specific software or hardware component using the Red Hat Certification tool.

2. Run the tests specified in the workflow guide, and submit the results by using the Red Hat Certification tool to the Red Hat certification team for analysis.

3. The certification team analyzes the test results and communicates any required retesting.

4. When all tests have favorable results, the certification is complete and the certified product is made available on the Red Hat Ecosystem Catalog.

The following diagram gives an overview of the certification workflow.
1.3. GETTING SUPPORT AND GIVING FEEDBACK

For any questions related to the Red Hat certification toolset, certification process, or procedure described in this documentation, refer to the KB Articles, Red Hat Customer Portal, and Red Hat Partner Connect.

You can also open a support case to get support or submit feedback.

To open a support case see, How do I open and manage a support case on the Customer Portal?

Questions During Certification

If you have any questions or responses about a specific certification, record them in the Comments section of the Dialog Tab of the certification entry.

Additional resources

- For more information about the requirements and policies for Red Hat OpenStack Certification, see Red Hat OpenStack Application and VNF Certification Policy Guide.
WARNING

Issues that can block a certification and might require resolution must be resolved through your Engineering Partner Manager or other engineering engagements.
CHAPTER 2. ONBOARDING CERTIFICATION PARTNERS

Use the Red Hat Customer Portal to create a new account if you are a new partner, or use your existing Red Hat account if you are a current partner to onboard with Red Hat for certifying your products.

2.1. ONBOARDING EXISTING CERTIFICATION PARTNERS

As an existing partner you could be:

- A member of the one-to-many EPM program who has some degree of representation on the EPM team, but does not have any assistance with OpenStack certification.

  OR

- A member fully managed by the EPM team in the traditional manner with a dedicated EPM team member who is assigned to manage the partner, including questions about OpenStack certification requests.

Prerequisites

You have an existing Red Hat account.

Procedure


2. Enter your Red Hat login or email address and click Next. Then, use either of the following options:
   a. Log in with company single sign-on
   b. Log in with Red Hat account

3. From the menu bar on the header, click your avatar to view the account details.
   a. If an account number is associated with your account, then contact the certification team to proceed with the certification process.
   b. If an account number is not associated with your account, then first contact the Red Hat global customer service team to raise a request for creating a new account number. After you get an account number, contact the certification team to proceed with the certification process.

2.2. ONBOARDING NEW CERTIFICATION PARTNERS

Creating a new Red Hat account is the first step in onboarding new certification partners.


2. Enter the following details to create a new Red Hat account:
   a. Select Corporate in the Account Type field.
      If you have created a Corporate type account and require an account number, contact the Red Hat global customer service team.
NOTE

Ensure that you create a company account and not a personal account. The account created during this step is also used to sign in to the Red Hat Ecosystem Catalog when working with certification requests.

b. Choose a Red Hat login and password.

IMPORTANT

If your login ID is associated with multiple accounts, then do not use your contact email as the login ID as this can cause issues during login. Also, you cannot change your login ID once created.

c. Enter your Personal information and Company information.

d. Click Create My Account
   A new Red Hat account is created.

3. Contact your Ecosystem Partner Management (EPM) representative, if available. Else contact the certification team to proceed with the certification process.
Before creating a Red Hat OpenStack Platform (RHOSP) application certification, you are encouraged to successfully execute the following certification tests on the overcloud compute node where the application is installed as a measure of compliance.

- OpenStack Director test (openstack/director)
- OpenStack Supportability tests (openstack/supportable)
- System Report (openstack/sosreport) test
CHAPTER 4. CREATING A NEW CERTIFICATION OR RECERTIFICATION PROJECT

Certification projects are tied to applications on a one-to-one basis. To certify several applications, you must create a project for each of them.

To update applications that are already certified, create a project for each application that is separate from the original certification project.

Procedure

1. Log in to Red Hat Partner Connect portal.
   The Access the partner portals web page displays.

2. Navigate to the Certified technology portal tile, and click Log in for technology partners.

3. Enter the login credentials and click Login.
   The Red Hat Partner Connect web page displays.

4. On the page header, select Product certification and click Manage certification projects.
   The page displays Product Listings and Certification Projects, if available.

5. Under the Certification Projects tab, click Create Project.

6. In the What platform do you want to certify on? dialog box, select Red Hat OpenStack and click Next.

7. In the What do you want to certify? dialog box, select VNF for OpenStack and click Next.

8. On the Create VNF for OpenStack project web page, provide the following details to create your project:
   - Project Name. The name you enter is for internal use only, and not published on the catalog.
   - OpenStack Version

After creating the project, you are ready to certify your application.
CHAPTER 5. SETTING UP THE TEST ENVIRONMENT

The first step towards certifying your product is setting up the environment where you can run the tests. The test environment consists of only Compute node.

All the mandatory tests that verify the system configuration required for VNF certification are run on the Compute node.

5.1. SETTING UP THE COMPUTE NODE

Prerequisites

- You have installed RHOSP on the system based on the supported RHEL version, as applicable. The corresponding supported versions are as follows:

<table>
<thead>
<tr>
<th>RHOSP version</th>
<th>Supported RHEL version</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHEL 16.0</td>
<td>8.1</td>
</tr>
<tr>
<td>RHEL 16.1</td>
<td>8.2</td>
</tr>
<tr>
<td>RHEL 16.2</td>
<td>8.4</td>
</tr>
<tr>
<td>RHEL 17.0</td>
<td>9.0</td>
</tr>
<tr>
<td>RHEL 17.1</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Procedure

1. Use your RHN credentials to register your system using Red Hat Subscription Management:

   ```bash
   # subscription-manager register
   ```

2. Display the list of available subscriptions for your system:

   ```bash
   # subscription-manager list --available*
   ```

   Search for the subscription that provides the Red Hat Certification (for RHEL Server) repository and make a note of the subscription and its Pool ID.

3. Attach the subscription to your system:

   ```bash
   # subscription-manager attach --pool=<pool_ID>
   ```

   Replace the pool_ID with the Pool ID of the subscription.

4. Subscribe to the Red Hat Certification channel:

   - On RHEL 8:
     ```bash
     # subscription-manager repos --enable=cert-1-for-rhel-8-<HOSTTYPE>-rpms
     ```
Replace HOSTTYPE with the system architecture. To find out the system architecture, run `uname -m`.

Example:

```bash
# subscription-manager repos --enable=cert-1-for-rhel-8-x86_64-rpms
```

- On RHEL 9:
  ```bash
  # subscription-manager repos --enable=cert-1-for-rhel-9-<HOSTTYPE>-rpms
  
  Replace HOSTTYPE with the system architecture. To find out the system architecture, run
  
  ```bash
  `uname -m`
  
  Example:
  ```bash
  # subscription-manager repos --enable=cert-1-for-rhel-9-x86_64-rpms
  
  5. Install the certification RPMs.
  
  - Only on RHEL 9
  
  ```bash
  `# yum install redhat-certification`
  
  6. Install OpenStack test suite package:
  
  ```bash
  `yum install redhat-certification-openstack`
  ```
CHAPTER 6. USING THE TEST PLAN TO PROVISION THE COMPUTE NODE

Procedure

1. Run the provision command.

```bash
# rhcert-provision <path_to_test_plan_document>
```

Replace `<path_to_test_plan_document>` with the test plan file saved on the test host.
CHAPTER 7. RUNNING THE CERTIFICATION TESTS

RHCert CLI is the supported method to run tests.

Procedure

1. Run tests
   
   
   
   
   # rhcert run

   The non-interactive tag is an RHCert flag used to run all certification-related mandatory tests.

2. Save the test result file
   
   
   
   
   # rhcert-save

   By default, the result file is saved as /var/rhcert/save/rhcert-results-<host-name>-<timestamp>.xml.
CHAPTER 8. SUBMITTING THE TEST RESULTS FILE

You can submit the test results file to Red Hat using either RHCert CLI or the Red Hat Certification Tool.

Using the RHCert CLI Tool:

Procedure

1. Log in to authenticate your device.

   NOTE
   Logging in is mandatory to submit the test results file.

   # rhcert-cli login

   a. Open the generated URL in a new browser window or tab.
   b. Enter the login and password and click Log in.
   c. Click Grant access. Device log in successful message displays.
   d. Return to the terminal and enter yes to the Please confirm once you grant access prompt.

2. Submit the result file.

   # rhcert-submit

   When prompted, enter your Certification ID.

Using Red Hat Certification Tool

Procedure

1. Log in to Red Hat Certification portal.

2. On the homepage, enter the product case number in the search bar. Select the case number from the list that is displayed.

3. On the Summary tab, under the Files section, click Upload.

Next steps

Red Hat will review your submitted results file and suggest the next steps to grant certification. Visit the Red Hat Certification portal for more information.

Once certified, the product is listed on the Red Hat Ecosystem Catalog.
CHAPTER 9. CERTIFYING OR RECERTIFYING AN APPLICATION

After creating a certification or recertification project, find it, configure it, and complete the pre-certification checklist publish your certification on the Red Hat Ecosystem Catalog.

9.1. FINDING YOUR PROJECT ON RED HAT PARTNER CONNECT

Procedure

1. Log in to Red Hat Partner Connect portal. The Access the partner portals web page displays.

2. Navigate to the Certified technology portal tile, and click Log in for technology partners.

3. Enter the login credentials and click Login. The Red Hat Partner Connect web page displays.


5. Click Manage Projects and select the project created in the Creating a new certification or recertification project section. The project web page has the following sections:
   - **Overview**: Contains the pre-certification checklist.
   - **Settings**: Lets you configure the project settings. Additionally, click the Actions menu to open a support case or archive the project.

9.2. COMPLETING THE PRE-CERTIFICATION CHECKLIST

The tasks detailed in the certification checklist give Red Hat more information about your application and your company. It also starts the certification or recertification process.

You must complete all the tasks on the checklist to publish the certification on the catalog.

9.2.1. Provide details about your certification

Procedure

1. Click Start.

2. Confirm the project name and add a technical contact email address.

3. Click Save.

9.2.2. Validate the functionality of your product on this OpenStack release

**NOTE**

You can only start this task once you have completed all the other tasks in the checklist.
After you click **Start**, Red Hat opens a certification case for you, and you are redirected to the Red Hat Certification portal site.

The certification team will contact you to start the certification testing process, and will follow up with you in case of a problem.

**9.2.3. Attach a completed product listing**

**Procedure**

1. Click the **Select Method** drop-down menu.

2. Select **Attach/edit**. You can either create a new product listing, or select an existing OpenStack product listing:
   
   - To select an existing product listing, click **View Product Listing or Related product listing**
   - To create a new product listing, click on **Create new product listing**
     Product listings must be fully completed and published before you can attach them to the checklist.

**9.2.4. Complete your company profile**

Ensure that your company profile is ready to be published on the catalog.

**9.3. MANAGING PROJECT SETTINGS**

You can configure the project settings by using the **Settings** tab. Enter the required details in the following fields:

<table>
<thead>
<tr>
<th>Field name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project name</td>
<td>Name of the project for internal purposes</td>
</tr>
<tr>
<td>Technical contact email address</td>
<td>Primary contact details of your product</td>
</tr>
</tbody>
</table>

**9.4. NEXT STEPS**

After completing the checklist, your application is certified. Now you are ready to publish your certification on the catalog.
CHAPTER 10. PUBLISHING ON THE CATALOG

You can publish your application on the Red Hat Ecosystem Catalog after completing the pre-certification checklist.

A RHOSP application certification is generated if, as part of the checklist:

- You ran the required tests successfully.
- Red Hat reviewed the testing configuration report, and found it was valid and appropriate for the certification.

Perform the following steps to publish your product on the catalog:

**Procedure**

1. Navigate to your **Product listing** page.
2. Click **Publish**.

Your certified application is now published on the Red Hat Ecosystem Catalog.