



Red Hat Connect for Technology Partners

Getting Started Guide - OpenStack / NFV Zone

Prepared for: Product Managers and Technical Staff
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Introduction

Welcome to Red Hat Connect for Technology Partners. This guide provides instructions on how to register for the Red Hat Connect for Technology Partner program.

This document will also guide you through the process of obtaining a “Red Hat Certified” designation for an OpenStack plugin that you have made deployable via a Linux container using Red Hat technology.

The process involves preparing your containerized application so that it meets certain criteria as specified in the Red Hat Certification Policy Guide, submitting it to Red Hat scan utility for certification, and publishing it so that the containerized application is available for consumption.

It should be noted that the ability to maintain the certification requires a commitment to maintaining the trustworthiness of the container, i.e., updating it as needed for security or other reasons.

NOTE: This document only covers partner registration with Red Hat Connect and the image certification scanning process for out of tree OpenStack plugins.

Functional testing and Red Hat OpenStack integration are out of scope of this document.

Register for RHC4TP & Request Technology Partnership

Go to connect.redhat.com and click *LOG IN* at the upper right of the page.

Click *REGISTER*.

 **redhat.**

**RED HAT
CONNECT**
for technology partners

Join

If you are new to Red Hat or Red Hat Connect for Technology Partners, register here.

REGISTER

Check to see if you have an existing account by searching your Red Hat account login Username.

If you do not have an existing User Account, check if your Company has an existing account by clicking *SEARCH FOR YOUR COMPANY*.

Note: If you find your company in the search field, please email connect@redhat.com to find out who the Org Admin is for your company, so they can add you to the existing account.

Existing accounts

Account Lookup

Use the field below to verify if you already have an account to access the Connect site. If an account is found you will be redirected to Red Hat's Single Sign-on system.

Enter your username:

FIND ACCOUNT

Create account

Don't have an account?

Before applying to join as a company we ask that you take a minute to search and see if your company is already in our system.

If your company already has an account we require that you create a new user for your company.

Search for your company.

If your company does not have an existing account, click *CAN'T FIND YOUR COMPANY* and then click *REGISTER NEW COMPANY*.

Find your company:

SELECT

☒ Can't find your company?

Register

If you can't find your company, you can register a new company and user via the Red Hat portal. With a Red Hat account, you will not only be able to log in to Red Hat Connect, but to other Red Hat properties as well.

REGISTER NEW COMPANY

Can't find a company you know is a member? [Contact Us](#) and report the missing issue.

Fill in all required fields and *SUBMIT*.

Create a Red Hat Login

A Red Hat account gives you access to product evaluations and purchasing capabilities.

* Indicates Required Field

Need access to an account?

If your company has an existing Red Hat account, your organization administrator can grant you access. If you have questions, [contact customer service](#).

Login Information

* Create a Red Hat Login:

Your login is a user ID for accessing your account across all Red Hat sites. It must be at least five characters and cannot be changed once created.

* Email Address:

* Password:

Your password must be at least six characters long. A strong password combines lower case letters, upper case letters, numbers, and symbols.

* Confirm Password:

Company Information

A confirmation Email will be sent (example email)

Once your Email has been confirmed, log in to your RHC4TP account at [connect.redhat.com](#). You will be redirected to the *Getting Started* page.

Note: If you are not redirected, please click *MANAGE COMPANY* and then click *BECOME A PARTNER*


You will now be required to complete the following sections (clicking *Next* after filling in the required information):

- Company Details
- Connect Details
- My Profile

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Once the Profile section is complete, you will need to review and accept the Technology Partner Program Agreement.

Signing up is simple, easy and catch-free. Since some of the program benefits require confidentiality protection, we do ask partners to agree to the terms

 [PA_Technology_Partner_Program_20150501.pdf](#)

☒ I agree with the Technology Partner Agreement Terms *

Back

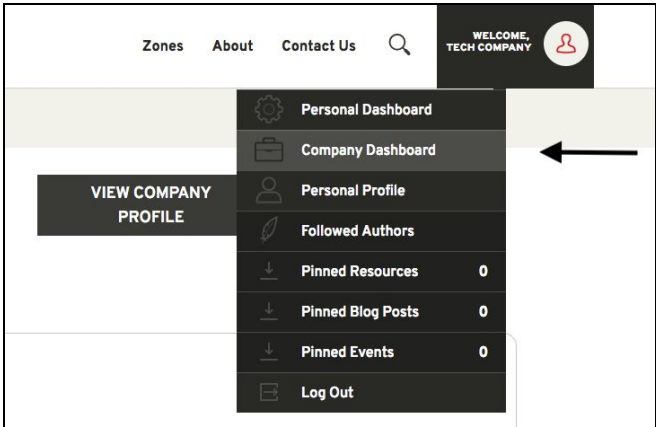
Complete

Request Zone Access

When you’re ready to certify your product on Red Hat Software, you will need to request Zone access and then create a Certification Project.

Go to connect.redhat.com and click *LOG IN* at the upper right of the page.

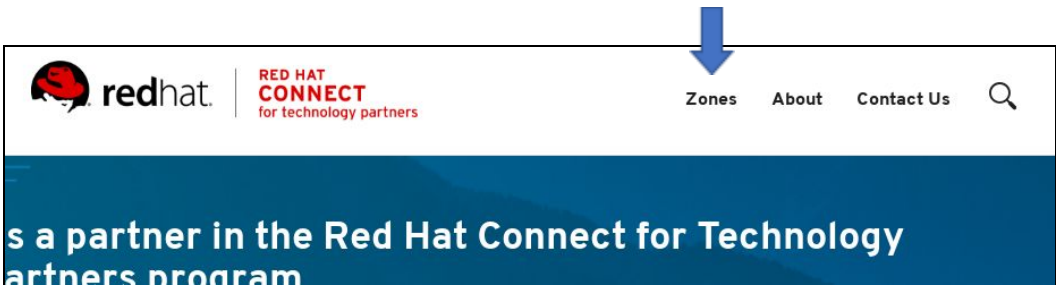
Click on *COMPANY DASHBOARD*



Then select *EDIT COMPANY PROFILE*

Complete all mandatory fields marked with an * and then click *SUBMIT* at the end of the page

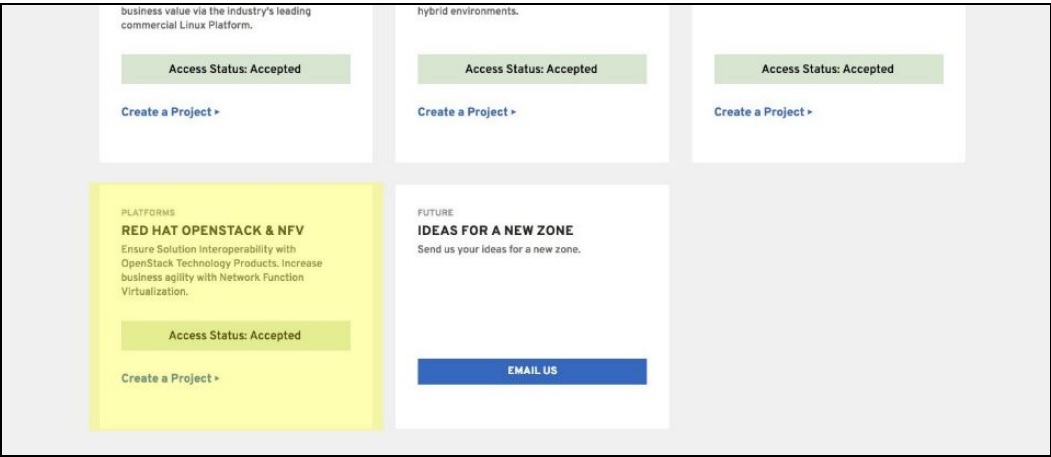
Click on *ZONES* at the top of the page.



Scroll down to Join a Zone section.

Under the Zone you wish to join, click *APPLY FOR ZONE ACCESS*.

For the OpenStack Plugins, you need to select OpenStack & NFV.



At this point you will via Email upon approval of your Zone Request.

Add a Product

Log in to your RHC4TP account at connect.redhat.com.

Select the *Human* icon at the top right of the screen and select *Company Dashboard* from the dropdown menu.


Scroll down to *Products* section.

Click *ADD A PRODUCT*.





Fill in all required information and click *SUBMIT*.


Note: The product information you enter will be used to feed the certified product catalog after certification is complete and approved by Red Hat, therefore verify all information is correct.



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for technology partners

[Zones](#) [About](#) [Contact Us](#) 

WELCOME,
RED HAT 

 [ADD CONTENT](#)

Create partner product

Product Name *

Acme_demo_Openstack_plugin

Brief Overview *

Demo

Product Description *

Demo

Content limited to 32768 characters, remaining: 32764

Switch to rich text editor

More information about text formats

Text format

Filtered HTML

Product type (select all that apply) *

☒ Use Company Logo

Product Logo

Choose file

No file chosen

Upload

Files must be less than 15 MB.

Allowed file types: png gif jpg jpeg.

Product URL *

https://www.acme.com

Download URL

Catalog Location

Does this product already exist in the Red Hat catalog?

- None -

Add new Version

Note: If the plugin comes in multiple versions, you need to specify the different versions in order to create a Project for each version.

Partner Product Versions *

PRODUCT VERSION	OPERATIONS
RHOSP 13 network plugin version 1.x	<div>Remove</div> <div>Edit</div>
RHOSP 13 network plugin version 2.x	<div>Remove</div> <div>Edit</div>
RHOSP 13 storage plugin version 1.x	<div>Remove</div> <div>Edit</div>
RHOSP 13 storage plugin version 2.x	<div>Remove</div> <div>Edit</div>

Add new Version

Product Contact Distribution List *

plugin-product-management@acme.com
plugin-engineering-team@acme.com

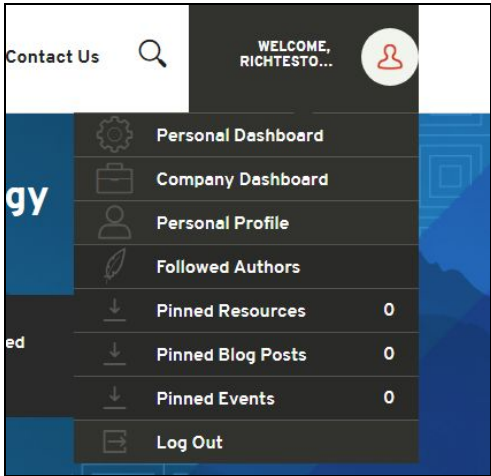
Note: The Product Contact Distribution List must contain the email

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Add a New User to the RHC4TP Account

Login to your RHC4TP account at connect.redhat.com

Click on the *Human* icon at the top right of the page and select *Company Dashboard* from the drop-down menu



Scroll down to *Users* section and click *MANAGE USERS*.

Users

View and manage company users. The five most recently created users are listed.

MANAGE USERS

USER NAME	EMAIL	USER TYPE	DATE CREATED	LAST ACCESSED
Ritchie Bernier	richard.bernier	Org Admin	12/11/2017	12/12/2017

View All Users

Click *ADD NEW USER*

User List

Edit - RichTestOnly2017

Add New User

ACTIVE

INACTIVE

ALL

Displaying 10 users per page0 users selected from tableFilter

<input type="checkbox"/>	Username	First Name	Last Name	Position	Department	Created	Updated
No user entries were found.							

No user entries were found.

Fill in required information, then click *SAVE*.

Create New User

Return to user list

Name:

Greeting:

* First name:

* Last name:

Suffix:

NOTE: For a User to access software and certification tools, you must check the Organization


Administrator (Org Admin) box. Multiple users can be Organization Administrators.

Request Software Access

Log in to your RHC4TP account at connect.redhat.com.

Scroll down to the *As a program member you receive* section and click *LEARN MORE* under *Software access*.


As a program member you receive



Software access

No cost Red Hat software subscriptions (also called NFR's) for our program partners to help grow our joint businesses.


[Learn more >](#)



Technical resources

Access information to increase your knowledge about Red Hat Products and Technologies.

[Learn more >](#)



Access to zones

Zones are special-interest areas for partners of varying types to get privileged access to information and activities.

[Learn more >](#)

On the Red Hat Software Access Page, scroll down to *PLATFORMS* and click *REQUEST SUBSCRIPTION* under the software you need

PLATFORMS

RED HAT
ENTERPRISE LINUX

On Premise

Request a subscription of Red Hat Enterprise Linux and Red Hat Virtualization. Access will be granted to your Red Hat account, and you will receive an email notification.

[Request Subscription >](#)

PLATFORMS

RED HAT
VIRTUALIZATION

On Premise

Request a subscription of Red Hat Virtualization. Access will be granted to your Red Hat account. You will receive emails to notify you about the status of your request. If you have requested access to Red Hat Enterprise Linux through our program, Red Hat Virtualization has already been included.

You will receive an email once software access has been granted.

Access granted software entitlements

Go to access.redhat.com

Click *DOWNLOADS* under Quick links at the bottom of the page

Choose the product family

Then follow the instructions to download

Create a Certification Project

Log in to your RHC4TP account at connect.redhat.com.

Select *ZONES* at the top of the page.

Scroll down to the OpenStack & NFV Zone and create the Project under and click *CREATE A PROJECT*.

PLATFORMS

RED HAT OPENSTACK & NFV

Ensure Solution Interoperability with OpenStack Technology Products. Increase business agility with Network Function Virtualization.

Access Status: Accepted

Create a Project >

Complete the required fields and click *SUBMIT*.

Create a New Project

Follow these steps to certify your product against Red Hat's OpenStack platform. Assure your customers that your cloud solution has been validated against the same commercial product they deploy in production, and is backed up by collaborative support.

Project Name *

acme_demo_openstack_storage_plugin

Product *

Acme_demo_Openstack_plugin

Product Version *

1.0

Release Category *

Tech Preview

Red Hat Product *

Red Hat OpenStack Platform

Red Hat Product Version *

13

SUBMIT

Note: Select Tech Preview for the Release Category. General Availability is not an option for OpenStack plugins due to the API testing that is completed using the rhcert portal .

After you have created the Project, you will presented with the page below.

RED HAT OPENSTACK & NFV

Acme_demo_Openstack_plugin (1.0)

Project ID: f34cbd3f-8049-414a-8ffe-58d69c0746a5

Project Name: acme_demo_openstack_storage_plugin

Registered: Jun 12, 2018

Certifying on OpenStack

After we determine how your project should be certified, we will send you an email with the next steps. If your product was not contributed to the upstream OpenStack community, you may need to complete a second certification step.

Please send an email to connect@redhat.com stating whether the plugin is “in tree” or “out of tree” in regards to the upstream code.

In Tree = Plugin is included in the OpenStack upstream code base and the plugin image is built by Red Hat and distributed with RHOSP 13.


Out of Tree = Plugin image is **NOT** included of the OpenStack upstream code base and **NOT** distributed within RHOSP 13.

After the plugin status is confirmed and approved, you will be able to move on the the Certification Workflows.


Out of Tree Certification Workflow


If the partner has not contributed the plugin to the OpenStack upstream code base, the image will need to complete the following checklist and use the Red Hat Automated Build Service (ABS) to push and scan the image.


To get started, visit your company dashboard and select the project under the OpenStack & NFV Zone. Upon clicking on your project, you will be directed to your project detail page. The next steps will relate to the Container Certification Checklist.



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WELCOME,
GC TECH LLC 

 ZONES CONTAINERS PROJECTS GC_DEMO_OPENSTACK_PLUGIN

RED HAT OPENSTACK & NFV

demo_openstack_plugin (v0.0.1) demo_openstack_plugin v0.0.1

Actions

[Container Project Status](#)

[Project Settings](#)

[Certification Checklist](#)

[Build Service](#) BETA

Container Information

Upload Your Image

Container Information

CONTAINER IMAGE	STATUS	ACTIONS
No container images available.		

Container Certification Checklist

Certified containers are applications that meet Red Hat’s best practices for packaging, distribution, and maintenance. Certified containers imply a commitment from partners to maintain their images up to date and represent the highest level of trust and supportability for Red Hat customers container-capable platforms, including Red Hat OpenStack Platform.

To access the Certification Checklist, click on the option in the left hand box:

Actions

Container Project Status

Project Settings

Certification Checklist

Build Service BETA

The goal is to complete all sections of the certification checklist. If you need more information, you can click on the dropdown arrows and it will provide you with relevant links.

Example of a Container Checklist in progress:

Certified ⓘ		
>	Update your company profile	<div><div></div><div>EDIT</div></div>
>	Update your product profile	<div><div></div><div>EDIT</div></div>
>	Accept the OpenStack Appendix	<div><div></div><div>EDIT</div></div>
>	Update your project profile	<div><div></div><div>EDIT</div></div>
>	Package and test your application as a con...	<div><div></div><div>LEARN MORE</div></div>
>	Upload documentation and marketing mat...	<div><div></div><div>START</div></div>
>	Provide a container registry namespace	<div><div></div><div>EDIT</div></div>
>	Provide sales contact information	<div><div></div><div>EDIT</div></div>
>	Obtain distribution approval from Red Hat	<div><div></div><div>START</div></div>
>	Configure Automated Build Service	<div><div></div><div>START</div></div>

Note: If you would like to manually push your images instead of using the Automated build Service, please see Appendix 1

Checklist Section Descriptions

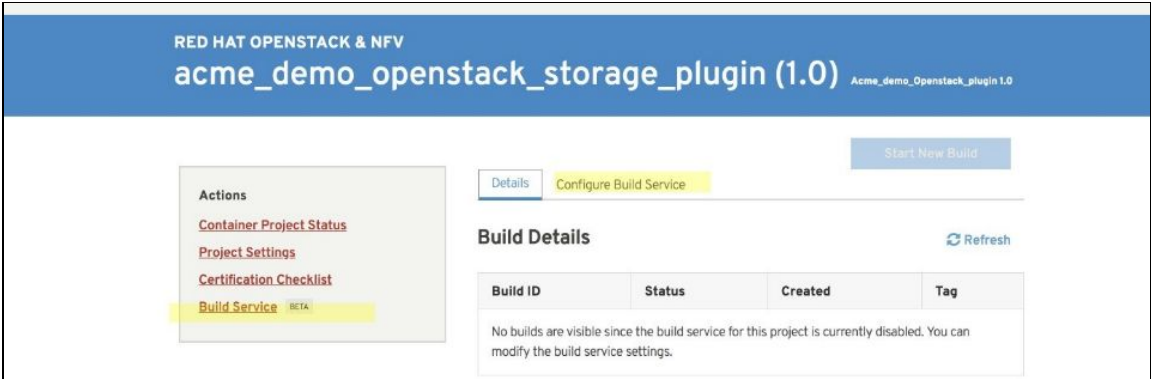
- *Update your company profile*
 - This page is to ensure that your company profile is up to date. Edit if necessary.
- *Update your product profile*
 - This page relates to the product's profile such as product type, description, repository URL, version, contact distribution list, etc.
- *Accept the OpenStack Appendix*
 - Site Agreement to the Container Terms.
- *Update project profile*
 - This section relates more to the image/container settings such as Auto Publish feature, registry namespace, release category, supported platforms.
- *Package and test your application as a container*
 - Follow the instructions on this page to configure the build service. The build service will be dependent on the complete of the previous steps.
- *Upload documentation and marketing materials*
 - This will bring you to the product page. Scroll to the bottom and click on **Add new Collateral** to upload your product information.
- *Provide a container registry namespace*
 - This is the same as the project page profile page.
- *Provide sales contact information*
 - Again, this information is the same as the company profile.
- *Obtain distribution approval from Red Hat*
 - Red Hat will take care of this step.
- *Configure Automated Build Service*
 - The build service is where Red Hat will automatically build your container/image by utilizing the Dockerfile provided in your repository. The advantage of setting up the automated build service is that your image will update whenever the underlying base image/OS is updated, to ensure up-to-date security. Part of the agreement of using Red Hat's services requires that your container meets a high security standard. See section "Build Service" to get started with this.

Configuring the Automated Build Service

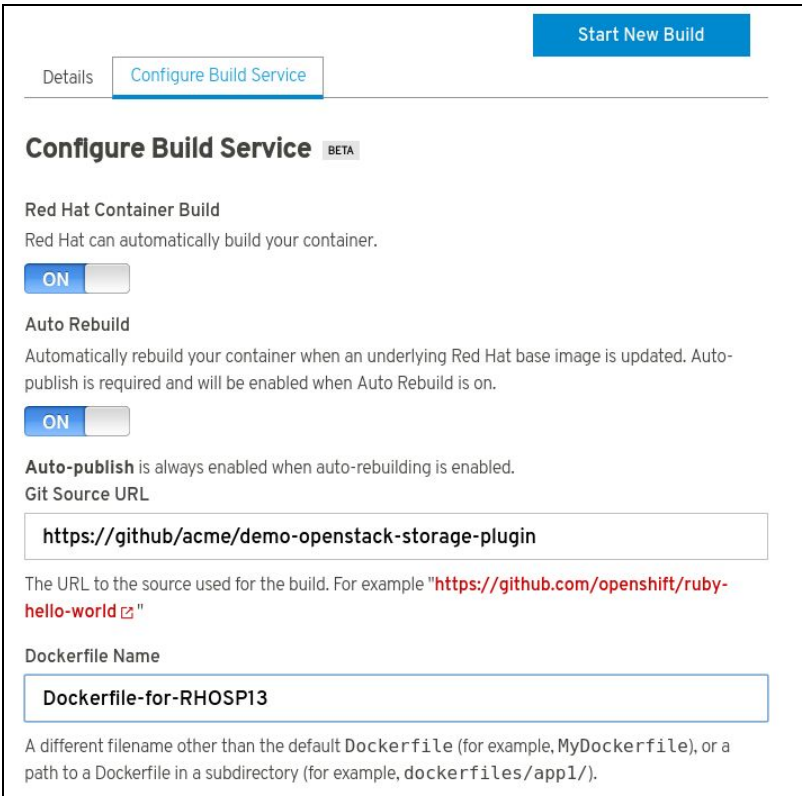
After approval, you'll be able to use the build service to build and scan your container image. The images below highlight the configuration needed to set this up.

Note: The only requirement to use this service is that the image bits be accessible via a github/gitlab repository. If the git repository is internal, ssh access to the bits is required. This service automates the rebuilding of the image whenever an updated Red Hat package is available.

In the left hand box, click on Build Service:



Click on the Configure Automated Build Service tab and fill in the git repo and the Dockerfile name if it has a name other than “Dockerfile”



Click “Start New Build” button at the top of the page

Enter a tag number (the version number of the plugin) and click *SUBMIT* to begin the build and scan process.

Tag Name *

An image tag name is subject to the following restrictions:

Must be valid ASCII.

Cannot contain special characters other than underscores, periods and hyphens (-).

Must not not start with a period or a hyphen (-).

Must be 32 characters or less.

Cancel

SUBMIT

RED HAT OPENSTACK & NFV

acme_demo_openstack_storage_plugin (1.0)

Acme_demo_Openstack_plugin 1.0

Actions

Container Project Status

Project Settings

Certification Checklist

Build Service BETA

Container Information

Upload Your Image

Container Information

CONTAINER IMAGE	STATUS	ACTIONS
1.0	Scan In-Progress	View Publish Remove

NOTE: The Build Service must first be completed before it can begin the scanning process for certification. If your Build Service fails or does not complete, make sure the details you entered under the Configure Build Service tab is correct and confirm that your Dockerfile conforms to the examples provided in this [link](#).

Once the image has completed the scan in Red Hat Connect repository, the image will show the results of the scan. Scans normally take about 10-15 minutes to complete.

Actions

Container Project Status

Project Settings

Certification Checklist

Build Service BETA

Container Resources

Container Certification Policy Guide

Partner Build Service for Containers

Container Information

Upload Your Image

Container Information

CONTAINER IMAGE	STATUS	ACTIONS
1.0	Passed	View Publish Remove
1	Failed	View Publish Remove

The “View” button will expand on the scan results. The “Publish” button will publish the image to the Red Hat Container Catalog. It will change to “Unpublish” once and image has been published. The “Remove” button allows you to remove an image that you do not want to use or need anymore.

Preparing the image for scanning

Although not necessary to successfully build a running container image, Red Hat requires specific labels and metadata in your Dockerfile for the image to pass the scan. In addition to labels, the scanner also requires licenses and it must be added to the Dockerfile.

Please see the OpenStack & NFV neutron and cinder examples in this link for guidance:
<https://github.com/RHC4TP/starter>

Below is a snippet of a Dockerfile which includes the required section for labels:

```
FROM registry.access.redhat.com/rhosp13/openstack-cinder-volume
MAINTAINER VenderX Systems Engineering <maintainer@vendorX.com>

###Required Labels
LABEL name="rhosp13/openstack-cinder-volume-vendorx-plugin" \
      maintainer="maintainer@vendorX.com" \
      vendor="VendorX" \
      version="3.7" \
      release="1" \
      summary="Red Hat OpenStack Platform 13.0 cinder-volume VendorX PluginY" \
      description="Red Hat OpenStack Platform 13.0 cinder-volume VendorX PluginY"
```

Image Results (from a scan)

If the image returns a “Failed” scan status, the results will automatically be displayed. Click on the name of the failed item (in this example, “has_licenses”) for reference to the policy guide.

Scan Details	
▾ Assessments	
Name	Value ▲
has_licenses	X
not_running_privileged	✓
rpm_list_successful	✓
rpm_verify_successful	✓
is_rhel	✓
vendor_label_exists	✓
free_of_critical_vulnerabilities	✓
good_tags	✓
good_layer_count	✓
release_label_exists	✓
not_running_as_root	✓
version_label_exists	✓
name_label_exists	✓

***NOTE:** If you receive an “Access Denied” link when accessing the Policy Guide, please reach out to connect@redhat.com

Export Compliance Questionnaire

Red Hat Export Questionnaire and Resource Links

This section references a set of questions provided by the Red Hat legal team for evaluation of export compliance by third party software vendors.

The resource links and questions should be reviewed and answered by a legal representative of the partner.

Completion and returning this document does not guarantee export compliance approval, but begins the evaluation process by Red Hat.

Depending on the answers provided, a set of follow-up questions may be necessary.

In the event that you have insufficient information to complete the questionnaire, some additional resources are provided in Part 2 below.

- The evaluation process is outlined below:
- Step 1: Red Hat provides questionnaire to partner to complete
 - Step 2: Partner engages their legal team to review and respond to questionnaire
 - Step 3: Partner returns completed questionnaire to Red Hat
 - Step 4: Within approximately 5 business days, Red Hat legal evaluates responses and
 - a. Approves partner
 - b. Defers decision
 - c. Requests more information
 - d. Declines partner

Part I: Red Hat Questionnaire
Please access and complete this [export questionnaire](#).

At this time, Red Hat is NOT able to accept applications that are authorized for export as encryption items under License Exception ENC §740.17(b)(2) and/or License Exception ENC §740.17(a) of the U.S. Export Administration Regulations.

Part II: Resources

In the event that your company has not previously gone through the process of obtaining an export classification, or if you have not gone through this process for the product that you intend to publish in the Red Hat Container Catalog, the U.S. Department of Commerce’s Bureau of Industry and Security provides these resources.

Unfortunately Red Hat cannot provide any guidance or help with our partners’ export control compliance.

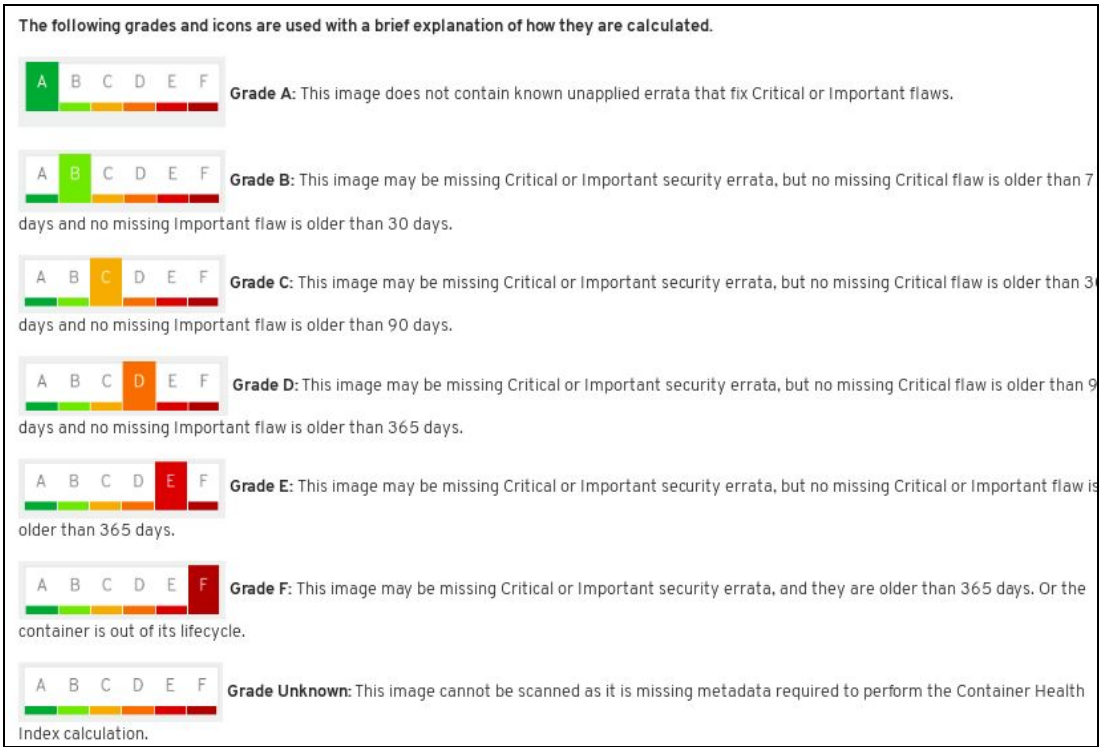
EAR/Encryption Overview	https://bis.doc.gov/index.php/1-encryption-on-items-not-subject-to-the-ear/15-policy-guidance/encryption	Guidance for determining whether your item is subject to the EAR.
Encryption items not subject to the EAR	https://bis.doc.gov/index.php/1-encryption-on-items-not-subject-to-the-ear	
Flowchart 1	https://bis.doc.gov/index.php/documents/new-encryption/1654-flowchart1/file	Item designed to use encryption NOT controlled under Category 5, Part 2
Flowchart 2	https://bis.doc.gov/index.php/documents/new-encryption/1655-flowchart-2-1/file	Item classified under an ECCN in Category 5, Part

	<u>e</u>	2
License Exception ENC §740.17/ Mass Market Chart	https://bis.doc.gov/index.php/documents/new-encryption/1651-740-17-enc-table/file	
Chambers & Global - US Export Control Lawyers	http://www.chambersandpartners.com/12788/525/editorial/5/1	
Red Hat Export Control Product Matrix (for example purposes)	https://www.redhat.com/en/about/export-control-product-matrix	

Maintaining Certified Images

Image Maintenance Requirements

As software package vulnerabilities are discovered it is important to rebuild container images to keep them up-to-date. Without automation this process quickly becomes onerous and reflects poorly on the catalog listing. Organizations frequently run vulnerable software but few want to download vulnerable software. It is a requirement of Red Hat Connect Partner Program that the partner maintain the image certification. Red Hat publishes a “Container Health Index” (or CHI) as described here to inform partners about those situations where an image might need to be updated.



Reference: <https://access.redhat.com/articles/2803031>

If a container image falls below an "A" grade, a periodic email from connect@redhat.com will be sent out to the partner contact list.

Online Resources

OpenStack Documentation	https://docs.openshift.com/container-platform/
Red Hat Atomic Recommended Practices for Container Development	https://access.redhat.com/articles/1483053
Continuous integration Examples	https://rhsyseng.github.io/containerzone-pipeline-library/#_example_jenkins_pipeline_using_docker
Examples of scan ready Dockerfiles	https://github.com/RHC4TP/starter.git
Docker tagging	https://docs.docker.com/engine/reference/commandline/tag/

Setting up a test RHEL system for building OpenStack images:
<https://access.redhat.com/articles/1127153>

Appendix 1

Manually Upload your Image

This information can be located in the UPLOAD YOUR IMAGE tab on the Projects page.

Cut and paste the following line to your terminal.

```
# docker login -u unused -e none scan.connect.redhat.com
```

When prompted for the password copy and paste the **Registry Key** located on the **Upload Your Image** tab in the project. This Registry Key is unique per project, please make sure you are using the correct password for the project you are working on.

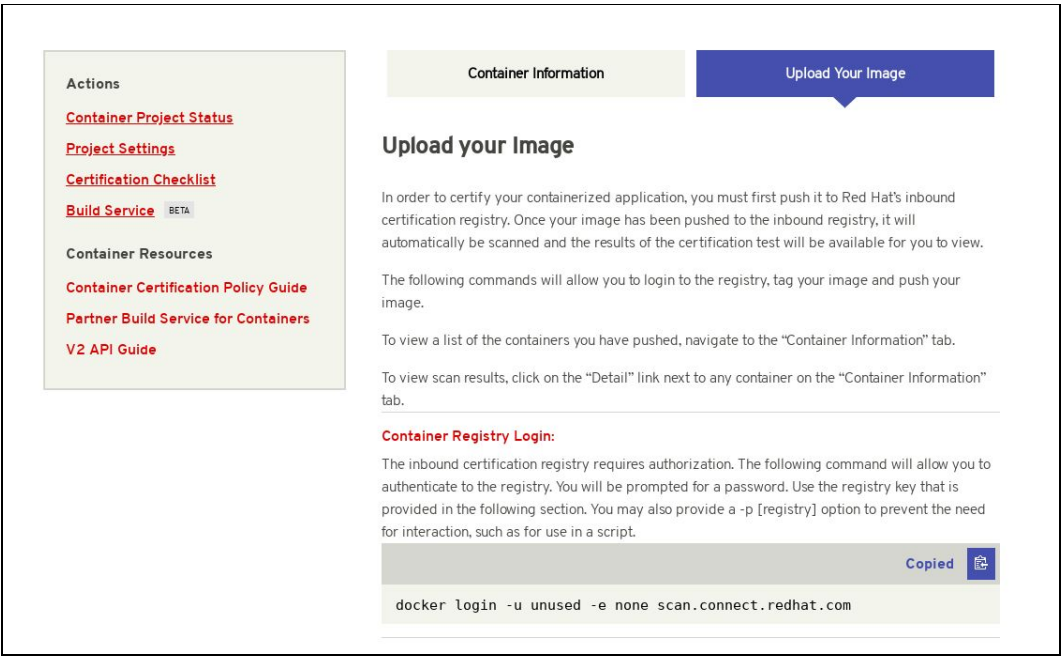


Image Scan

After the image has completed being uploaded, the image will display “Scan In-Progress” in the “Status” column.

Note: To pull an image after it has been pushed via the Automated Build Service or via the command line, log in using the docker command in line 1 and 2 and change the “push” to “pull” in line 4
For example:
docker pull scan.connect.redhat.com/ospid-0ad3dd53-7bfd-4f8a/{plugin-name}:[tag]