



# **Red Hat Connect for Technology Partners**

## **Getting Started Guide - OpenStack / NFV Zone**

Prepared for: Product Managers and Technical Staff  
Draft Version: 20180801 (preliminary release)

# Table of Contents

<b>Introduction</b>	<b>3</b>
<b>Register for RHC4TP &amp; Request Technology Partnership</b>	<b>4</b>
<b>Request Zone Access</b>	<b>6</b>
<b>Add a Product</b>	<b>7</b>
<b>Add a New User to the RHC4TP Account</b>	<b>9</b>
<b>Request Software Access</b>	<b>10</b>
<b>Access granted software entitlements</b>	<b>10</b>
<b>Creating a Certification Project</b>	<b>10</b>
<b>Out of Tree Certification Workflow</b>	
The Container Certification Checklist	12
Certification Checklist Section Descriptions	14
Preparing the Image For Scanning	14
Dockerfile Requirements	14
The Automated Build Service	15
Image Scan Results	17
<b>Export Compliance Questionnaire</b>	<b>18</b>
<b>Maintaining Certified Images</b>	<b>19</b>
<b>Online Resources</b>	<b>20</b>
<b>Appendix 1</b>	<b>21</b>
<b>Manually Upload your Image</b>	<b>21</b>
<b>Image Scan</b>	<b>21</b>

## 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.

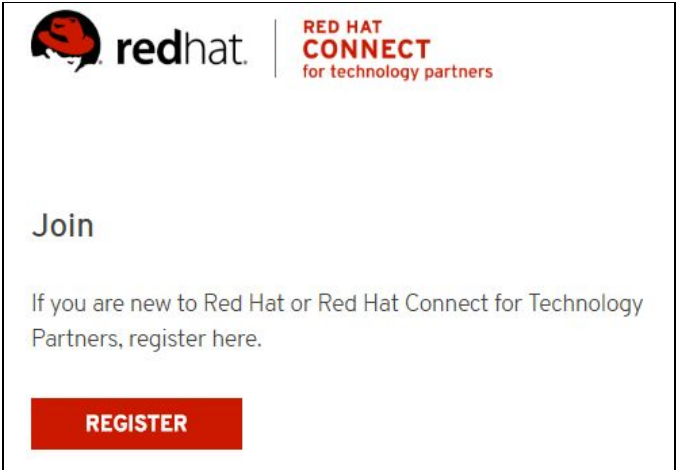
**NOTE:** This document only covers partner registration with Red Hat Connect and the image certification scanning process for out of tree OpenStack plugins.

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](https://connect.redhat.com) and click *LOG IN* at the upper right of the page.

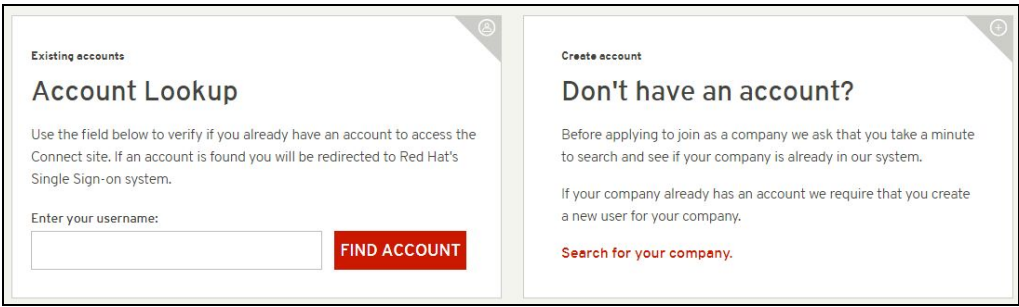
Click *REGISTER*.



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](mailto:connect@redhat.com) to find out who the Org Admin is for your company, so they can add you to the existing account.



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)

no-reply@redhat.com

to me 

Dear Red Hat User,

This email is sent to validate the email address that you have provided for your Red Hat login. Your Red Hat login, in combination with an active Red Hat subscription, provides you with access to systems management capabilities through Red Hat Network.

To ensure the security of the account information associated with your Red Hat login, please take a moment to click through the link below and verify that we have the correct email address. If you do not confirm your email address, your Red Hat login will eventually be disabled.

To confirm your email address, please visit the following URL:

<https://www.redhat.com/wapps/unc/confirm.html?kev=CQhHBI Ki.II7.IGisiIC>

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



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 \*

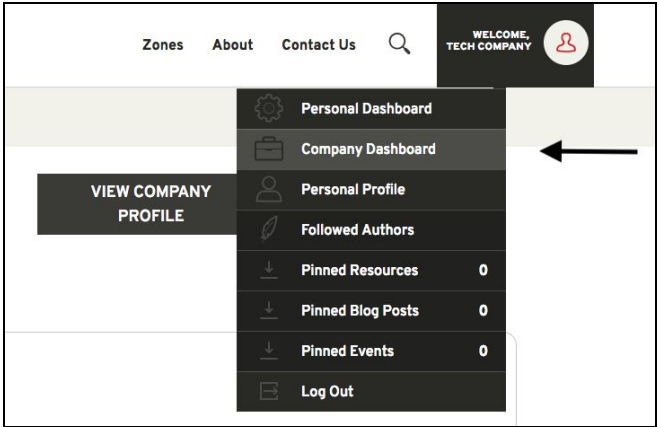
BackComplete

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](https://connect.redhat.com) and click *LOG IN* at the upper right of the page.

Click on *COMPANY DASHBOARD*



Then select *EDIT COMPANY PROFILE*

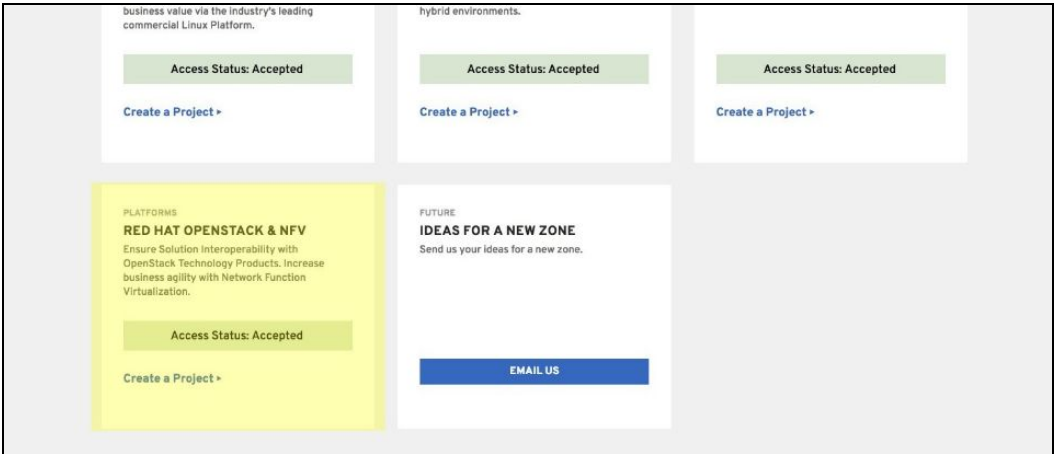
Complete all mandatory fields marked with an \* and then click *SUBMIT* at the end of the page

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.

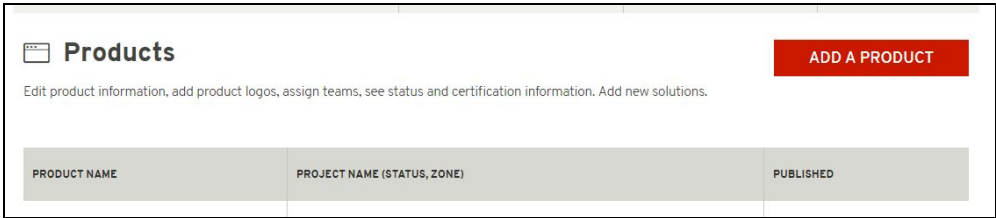
## Add a Product

Log in to your RHC4TP account at [connect.redhat.com](https://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.



RED HAT  
**CONNECT**  
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

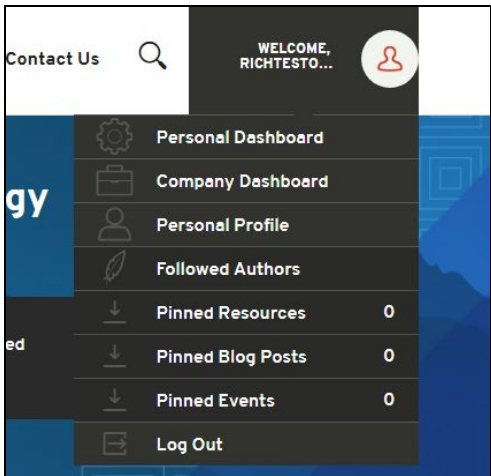
**Note:** The Product Contact Distribution List must contain at least one email.



# Add a New User to the RHC4TP Account

Login to your RHC4TP account at [connect.redhat.com](https://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**

[Add New User](#)

Edit - RichTestOnly2017

ACTIVE

INACTIVE

ALL

Displaying 10 users per page

0 users selected from table

Filter

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](https://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](https://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](https://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](mailto: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.



RED HAT  
CONNECT  
for technology partners

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

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.		

## The 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

Container Information

Upload Your Image

Container Information

CONTAINER IMAGE	STATUS	ACTIONS
No container images available.		

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

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

## Certification 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.

## 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>

### Dockerfile Requirements

1. Base image must be Red Hat. Any images using Ubuntu, Debian, CentOS, etc as a base will **not** pass the scanner.
2. You must configure the required labels (name, maintainer, vendor, version, release, summary)
3. Software [license\(s\)](#) must be included within the image.
4. You must configure a user other than root.

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



```
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"

USER root

###Adding package
###repo exmple
COPY vendorX.repo /etc/yum.repos.d/vendorX.repo

###adding package with curl
RUN curl -L -o /verdorX-plugin.rpm http://vendorX.com/vendorX-plugin.rpm

###adding local package
COPY verdorX-plugin.rpm /

# Enable a repo to install a package
RUN yum clean all
RUN yum-config-manager --enable rhel-7-server-openstack-13-rpms
RUN yum install -y vendorX-plugin
RUN yum-config-manager --disable rhel-7-server-openstack-13-rpms

# Add required license as text file in Liceses directory (GPL, MIT, APACHE, Partner End User Agreement, etc)
RUN mkdir /licenses
COPY licensing.txt /licenses

USER cinder
```

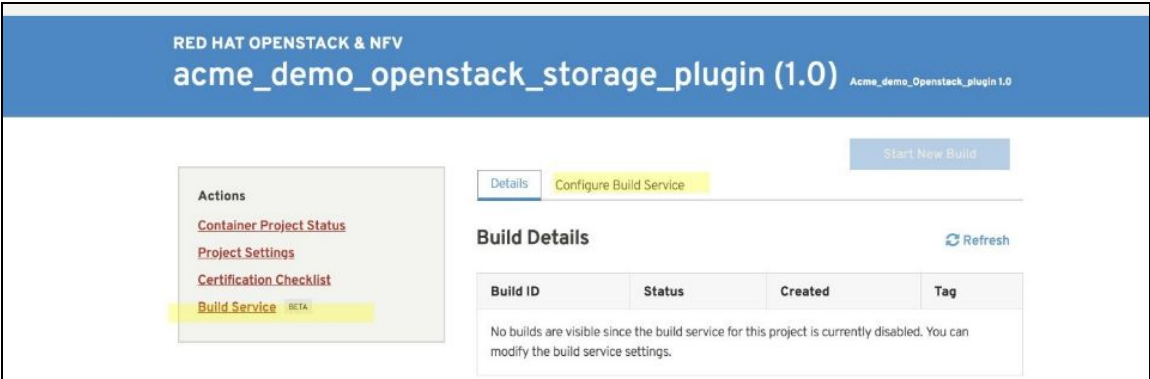
## The Automated Build Service

This service automates the rebuilding of your image whenever an updated Red Hat package is available. It also scans your image (after a successful build) for any security vulnerabilities that may be present prior to publishing your image to the Container Catalog.

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.

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”

Start New Build

DetailsConfigure Build Service

Configure Build Service

BETA

Red Hat Container Build

Red Hat can automatically build your container.

ON

Auto Rebuild

Automatically rebuild your container when an underlying Red Hat base image is updated. Auto-publish is required and will be enabled when Auto Rebuild is on.

ON

Auto-publish

is always enabled when auto-rebuilding is enabled.

Git Source URL

https://github/acme/demo-openstack-storage-plugin

The URL to the source used for the build. For example "https://github.com/openshift/ruby-hello-world"

Dockerfile Name

Dockerfile-for-RHOSP13

A different filename other than the default Dockerfile (for example, MyDockerfile), or a path to a Dockerfile in a subdirectory (for example, dockerfiles/app1/).

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 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](#)

Container Information

Upload Your Image

Container Information

CONTAINER IMAGE	STATUS	ACTIONS
1.0	Scan In-Progress	<a href="#">View</a>   <a href="#">Publish</a>   <a href="#">Remove</a>

**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

Container Information

CONTAINER IMAGE	STATUS	ACTIONS
1.0	Passed	<a href="#">View</a>   <a href="#">Publish</a>   <a href="#">Remove</a>
1	Failed	<a href="#">View</a>   <a href="#">Publish</a>   <a href="#">Remove</a>

Upload Your Image

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 an image has been published. The “Remove” button allows you to remove an image that you do not want to use or need anymore.

## Image Scan Results

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

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

## 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.

The following grades and icons are used with a brief explanation of how they are calculated.

A

B

C

D

E

F

Grade A: This image does not contain known unapplied errata that fix Critical or Important flaws.

A

B

C

D

E

F

Grade B: This image may be missing Critical or Important security errata, but no missing Critical flaw is older than 7 days and no missing Important flaw is older than 30 days.

A

B

C

D

E

F

Grade C: This image may be missing Critical or Important security errata, but no missing Critical flaw is older than 30 days and no missing Important flaw is older than 90 days.

A

B

C

D

E

F

Grade D: This image may be missing Critical or Important security errata, but no missing Critical flaw is older than 90 days and no missing Important flaw is older than 365 days.

A

B

C

D

E

F

Grade E: This image may be missing Critical or Important security errata, but no missing Critical or Important flaw is older than 365 days.

A

B

C

D

E

F

Grade F: This image may be missing Critical or Important security errata, and they are older than 365 days. Or the container is out of its lifecycle.

A

B

C

D

E

F

Grade Unknown: This image cannot be scanned as it is missing metadata required to perform the Container Health Index calculation.

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 Partner Integration	<a href="https://access.redhat.com/documentation/en-us/red_hat_openshift_platform/13/html/partner_integration/index">https://access.redhat.com/documentation/en-us/red_hat_openshift_platform/13/html/partner_integration/index</a>
OpenStack Documentation	<a href="https://docs.openshift.com/container-platform/">https://docs.openshift.com/container-platform/</a>
Red Hat Atomic Recommended Practices for Container Development	<a href="https://access.redhat.com/articles/1483053">https://access.redhat.com/articles/1483053</a>
Continuous integration Examples	<a href="https://rhsyseng.github.io/containerzone-pipeline-library/#_example_jenkins_pipeline_using_docker">https://rhsyseng.github.io/containerzone-pipeline-library/#_example_jenkins_pipeline_using_docker</a>
Examples of scan ready Dockerfiles	<a href="https://github.com/RHC4TP/starter.git">https://github.com/RHC4TP/starter.git</a>
Docker tagging	<a href="https://docs.docker.com/engine/reference/commandline/tag/">https://docs.docker.com/engine/reference/commandline/tag/</a>
Setting up a test RHEL system for building OpenStack images:	<a href="https://access.redhat.com/articles/1127153">https://access.redhat.com/articles/1127153</a>

# Appendix 1

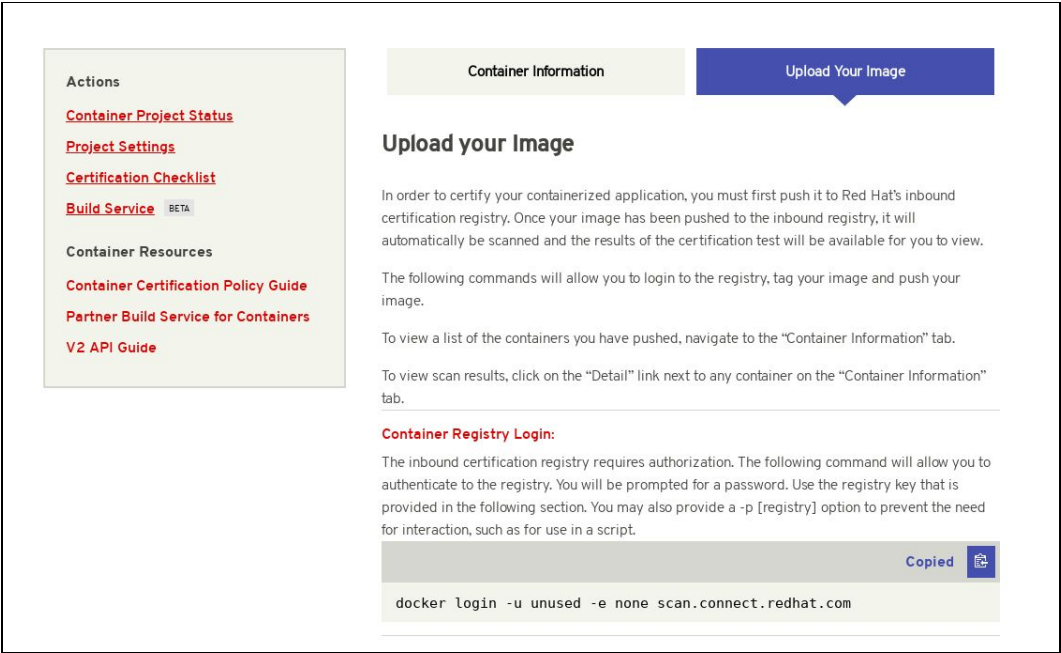
## Manually Upload your Image

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]