

Red Hat Connect for Technology PartnersGetting Started Guide - Container Zone

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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 application 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 for review and 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.

Register for RHC4TP & Request Technology Partnership

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

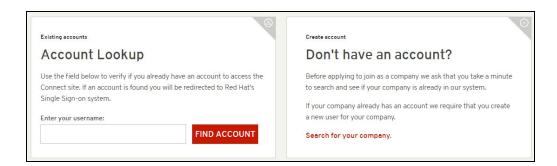
Click REGISTER.



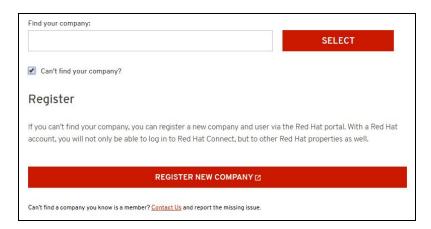
Check to see if you have an existing account by searching your Red Hat account login Username.

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 <u>connect@redhat.com</u> to find out who the Org Admin is for your company, so they can add you to the existing account.



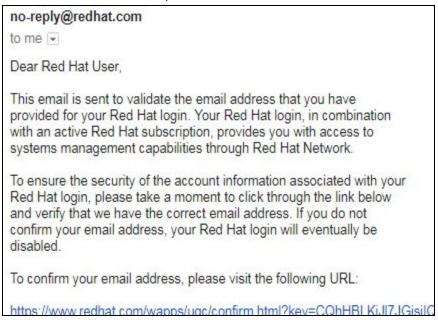
If your company does not have an existing account, click *CAN'T FIND YOUR COMPANY* and then click *REGISTER NEW COMPANY*.



Fill in all required fields and SUBMIT.

| Create a Red | Hat Login |
|------------------------------|--|
| Red Hat account gives you | access to product evaluations and purchasing capabilities. |
| Indicates Required Fiel | 4 |
| Need access to an accou | nt? If your company has an existing Red Hat account, your organization administrator can grant you access. If you have questions, contains customer service. |
| Login Information | |
| * Create a Red Hat Login: | |
| | Your login is a user ID for accessing your account across all Rise Hat site. It must be a least the characters and cannot be changed once register. |
| * Email Address: | |
| * Password: | |
| | Your pessword must be at least six characters long. A strong postword combines lover cose lettlers, upper cose lettlers, incommence, and youthout. |
| * Confirm Password: | |
| | |

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.

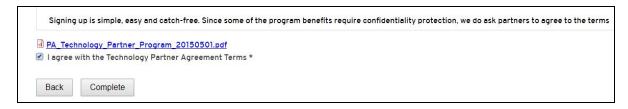
NOTE: If you are not redirected, please click *MANAGE COMPANY* and then click *BECOME A PARTNER*

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

Company Details Connect Details My Profile



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

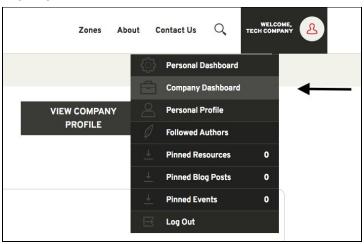


Request Zone Access

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 <u>connect.redhat.com</u> and click *LOG IN* at the upper right of the page.

Click on COMPANY DASHBOARD



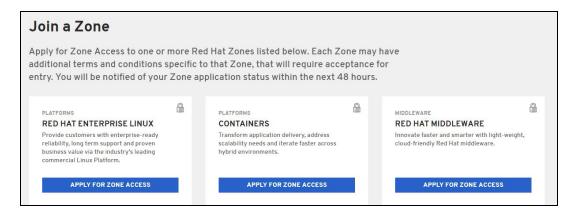
Then select EDIT COMPANY PROFILE

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.



You will be notified via Email upon approval of your Zone Request.

Add a Product

Log in to your RHC4TP account at <u>connect.redhat.com</u>.

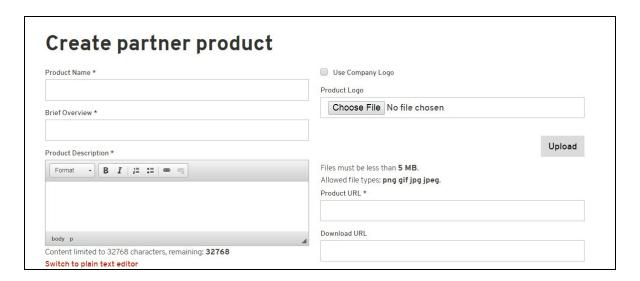
Select the *Human* icon at the top right of the screen and select *Company Dashboard* from the dropdown menu.

Scroll down to Products section.

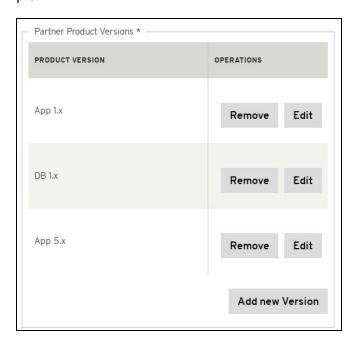
Click ADD A PRODUCT.

| Products Edit product information, add product logos, assign teams, see status and certification information. Add new solutions. | | | | |
|---|---|----------------|--|--|
| eart product information, add p | roduct logos, assign teams, see status and certification information. Add f | rew solutions. | | |
| PRODUCT NAME | PROJECT NAME (STATUS, ZONE) | PUBLISHED | | |

Fill in all required information and click SUBMIT.



If your Product requires more than one container, add the container names separately under Product Version. Example:

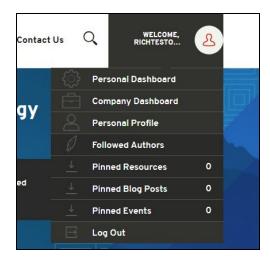


Note: The product information you enter will be used to feed the <u>certified product catalog</u> after certification is complete and approved by Red Hat, therefore verify all information is correct.

Add a New User to the RHC4TP Account

Login to your RHC4TP account at <u>connect.redhat.com</u>

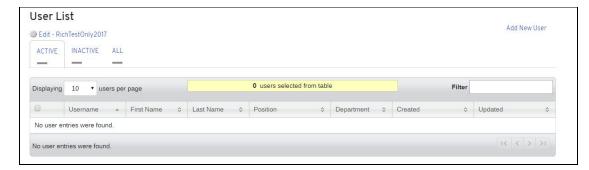
Click on the *Human* icon at the top right of the page and select *Company Dashboard* from the drop-down menu



Scroll down to Users section and click MANAGE USERS.



Click ADD NEW USER



Fill in required information, then click SAVE.

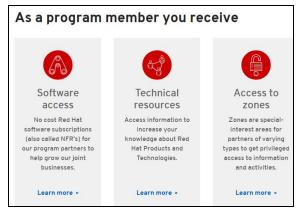


NOTE: For a User to access software and certification tools, you must check the Organization Administrator (Org Admin) box. Multiple users can be Organization Administrators.

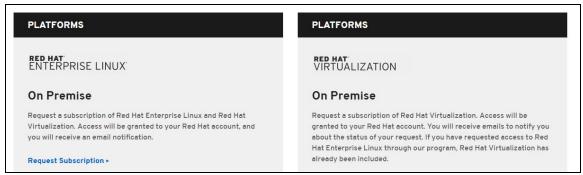
Request Software Access

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*.



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



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

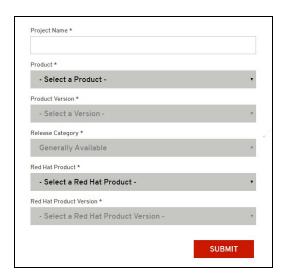
Log in to your RHC4TP account at connect.redhat.com.

Select ZONES at the top of the page.

Scroll down to the Zone you wish to create the Project under and click CREATE A PROJECT.



Complete the required fields and click SUBMIT.



For RHEL & Middleware Projects, complete the Certification Checklist and select PUBLISH.

| | Align | → | Build | → | Validate |
|---|--|----------|--|----------|--|
| 0 | Sign the Technology Partner Agreement | | Get familiar with Red Hat Enterprise Linux □ | | Verify the functionality of your application on RHEL |
| 0 | Make sure your company profile is current | | Review the RHEL ABI compatibility guide [2] | | Make sure your product profile is complete for publication |
| 0 | Request occess to Red Hat Enterprise Linux | | Determine if Software Collections 12 are right for your application | | Confirm that you commercially support your application on RHEL |
| | | | | | PUBLISH |

You will be contacted within 2 business days with the link to the Catalog entry for your Product.

Primed & Container Certification

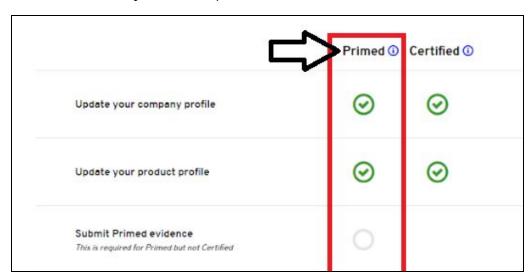
To find the Checklist for Primed and Container Certification go to your Project Page and select Certification Checklist located on the left menu under Actions.



Primed

Primed is a technical readiness designation for applications that interoperate with OpenShift. Through Primed, partners indicate that they have verified their product's functionality on OpenShift, taking the first step towards the ongoing commitment of container certification. Primed is also the suggested path for products that integrate with OpenShift but are not packaged as containers.

To achieve the Primed designation, complete the Primed section of the Container Checklist



The check marked box only indicates that the evidence has been submitted, NOT approved. Once the evidence is submitted, it will be reviewed and if your application successfully demonstrates running on the latest release of OpenShift, it will be listed in in the OpenShift Primed page found here.

https://access.redhat.com/openshift-primed/

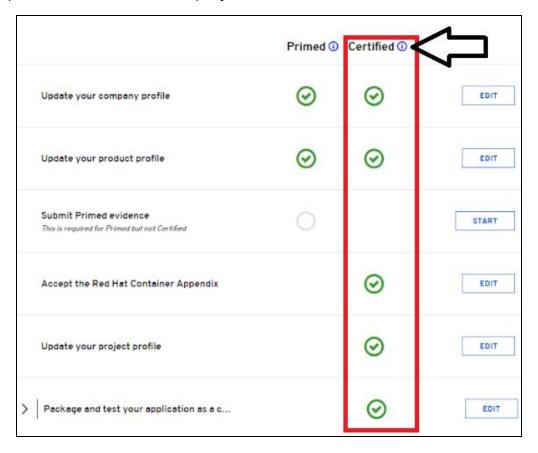
NOTE: Primed listing page is being redesigned and will be available soon.

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 OpenShift

For Container Certification, complete the *Certified* section of the checklist and publish the image. The certified container will be published in the <u>Red Hat Container Catalog (RHCC)</u>

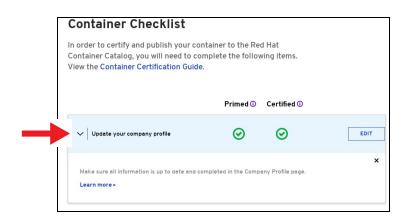
Example of Container Checklist in progress:



Container Checklist

The certified container will be published in the Red Hat Container Catalog (RHCC) along with containers published by Red Hat and those published by other software companies. The RHCC is the public-facing website that showcases the containerized applications suitable for enterprise consumption. RHCC pages will allow for publishing information about the partner company, and company's products, as well as technical information about the containerized application. There will also be a way to link in assets from the partner company (by URL) that provide additional information about the product, for example a datasheet, a solution brief, a pre-recorded webinar, a case study, etc. The data populating the RHCC is sourced from the Connect site. Therefore, it is important to review the company and product entries on Connect prior to publishing the container to RHCC.

Before your image gets published you must complete the Certification Checklist. Once all items are completed and your image has passed the scan, you will be able to publish to the Red Hat Container Catalog. Each item on the Checklist has more information, you can select the drop down arrow located to the left of each item to Learn More.



Red Hat Partner Logo

To download the *Red Hat Technology Partner logo*, please go to https://connect.redhat.com/benefits/marketing

If you have a product certified on Red Hat Technology, please contact us at connect@redhat.com so that we can send you the *Certified Product* logo.

Please contact connect@redhat.com for any questions or concerns.

Uploading your Image

There are two ways to Upload your Image. The recommended approach is through the build service. In order for you to use this, your application must be accessible through GitHub/GitLab. If your application is not accessible through GitHub/GitLab you can also manually upload your image.

Build Service

Build service allows Red Hat to build your container and upload it automatically through the portal. In order for you to use this, your application must be accessible through GitHub/GitLab.

You can use this <u>link</u> as a reference to how the Dockerfile needs to be configured to have your image build and pass the scan successfully. Depending on your zone, navigate to the appropriate directory. Here's an example of a Dockerfile for a service you may want to build on RHEL 7.

Note: Although labels and licenses are not required to successfully build a running container, they are required for the Red Hat build service and scanner.

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 <u>license(s)</u> 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 aforementioned requirements:

Dockerfile Example:

Using the Build Service:

Login to the Portal and go to your projects page

On the left side menu bar, under Actions, select BUILD SERVICE

Select the tab CONFIGURE BUILD SERVICE

Turn the switch from OFF to ON and fill the necessary information. Use **Auto Rebuild** to automatically rebuild your container when an underlying Red Hat base image is updated.

Click SUBMIT at the bottom of the page

| | ontainer Build in automatically build your container. |
|---|---|
| ON | |
| Auto Rebi | ild |
| | ally rebuild your container when an underlying Red Hat base image is updated. Auto- required and will be enabled when Auto Rebuild is on. |
| Auto-pub Git Source | IIsh is always enabled when auto-rebuilding is enabled. e URL |
| | |
| https:/ | /github.com/user_1/myrepo |
| The URL to | o the source used for the build. For example "https://github.com/openshift/ruby-dra" |
| The URL to | or the source used for the build. For example "https://github.com/openshift/ruby-do". Name |
| The URL to hello-worl Dockerfile Docker A different a path to a | or the source used for the build. For example "https://github.com/openshift/ruby-do". Name |
| The URL to hello-worl Dockerfile Docker A different a path to a | to the source used for the build. For example "https://github.com/openshift/ruby-dc" Name file filename other than the default Dockerfile (for example, MyDockerfile), or a Dockerfile in a subdirectory (for example, dockerfiles/appl/). |

If the application exists within a subdirectory the default location (the root directory) can be

Select START NEW BUILD blue button located on the right side

Create a Tag number and click SUBMIT

| Tag i | Name * |
|-------|---|
| An in | nage 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 is now building your container. Once it is completed you can go to Container Project Status to view the Status of your container.

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

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.

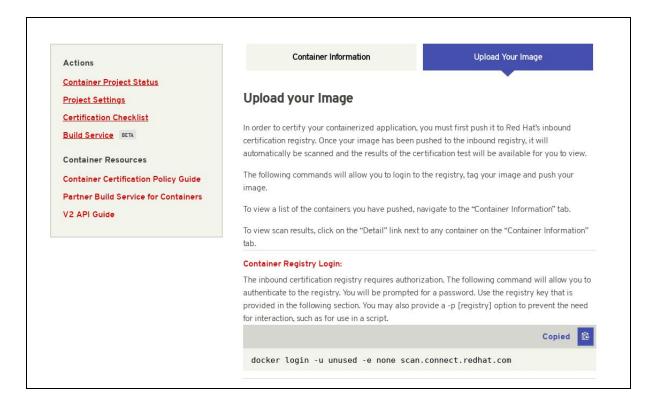


Image Scan

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

| CONTAINER IMAGE | STATUS | ACTIONS |
|-----------------|------------------|-------------------------|
| 1.2-2 | Scan In-Progress | View Publish Remove |

NOTE: It may be necessary to refresh the browser page to see the current status.

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.



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.

Image 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.

***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.

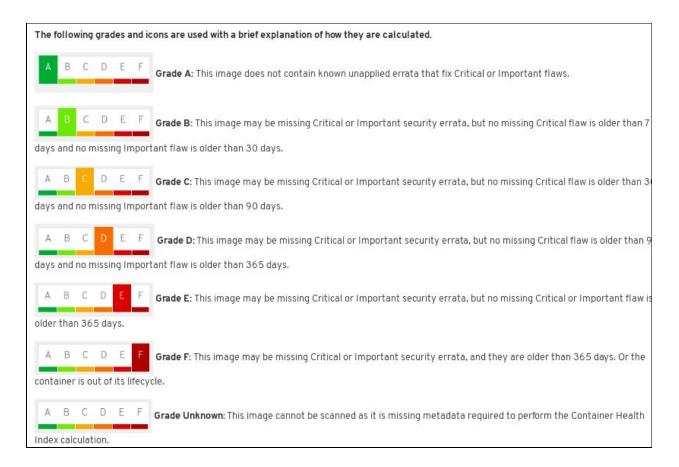
| EAR/Encryption Overview | https://bis.doc.gov/index.php/1-encrypti on-items-not-subject-to-the-ear/15-polic y-guidance/encryption | Guidance for determining whether your item is subject to the EAR. |
|---|---|---|
| Encryption items not subject to the EAR | https://bis.doc.gov/index.php/1-encrypti on-items-not-subject-to-the-ear | |
| Flowchart 1 | https://bis.doc.gov/index.php/document s/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/document s/new-encryption/1655-flowchart-2-1/fil | 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/document s/new-encryption/1651-740-17-enc-table /file | |
| Chambers & Global - US Export Control Lawyers | http://www.chambersandpartners.com/1 2788/525/editorial/5/1 | |
| Red Hat Export Control Product Matrix (for example purposes) | https://www.redhat.com/en/about/expor t-control-product-matrix | |

Maintaining Certified Images

Image Maintenance Requirements

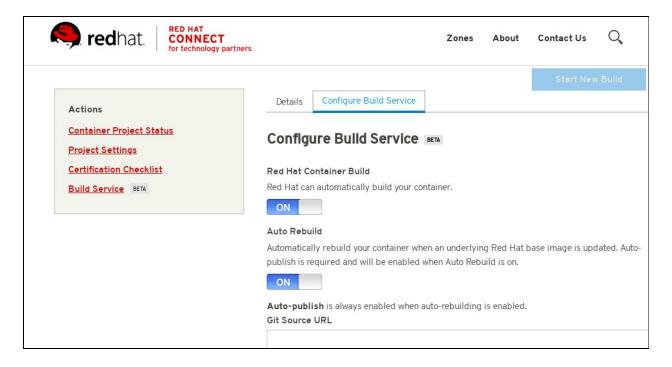
As software package vulnerabilities are discovered it is important to rebuild container images to keep them up-to-date. Without automation this process quickly becomes onerous and reflects poorly on the catalog listing. Organizations frequently run vulnerable software but few want to download vulnerable 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.

In order to keep the image up to date, it is recommended that the partner use the Red Hat Connect **Build Service** located in the Project section of Red Hat Connect. The option Auto-Rebuild will automatically rebuild your container and automatically publish it.



The only requirement to use this service is that the image bits be accessible via github/gitlab. If the github 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.

Top 6 FAQs

1. Who can upload images through the Portal?

A. The administrator account created for your organization may upload images. However, this account may grant permissions to other user accounts so that those accounts may also upload images.

2. Can I change the Product Version after I created a Project?

A. No you cannot; therefore make sure you set it up correctly before starting any project with that product version. Keep in mind that the product version should be considered as the name of the image, the version can be specified later on when you Tag your image during the project.

3. Can a container be built on another version of Linux other than Red Hat?

A. No, the Red Hat certification is a validation that the container, which is a combination of application software and Linux, is made of genuine Red Hat parts. Currently, Red Hat has just a little over one million paying customers today. Our customers do not use other versions of Linux and pay us for the services and support we provide to them. Therefore, your container needs to be built on a version of Red Hat Linux.

4. Will the catalog support an ISO or virtual machine image as the container image?

A. No, this certification process is specifically for containers. Therefore, your image needs to be in Dockerfile format. You can find an example provided by Red Hat Engineering: <u>Dockerfile Examples</u>

5. What path should my licenses be on?

A. Should be on / (the root or home directory of where the application resides). You can find an example provided by RH Engineer: Dockerfile Example

6. How do I change the namespace and repository name of my project?

A. First, unpublish all containers. Then change the namespace/repo in the project settings. Finally, re-publish your containers.

For a full list of FAQs please visit: http://people.redhat.com/~pchriste/.fag/

Online Resources

Learn Kubernetes by Example http://kubernetesbyexample.com/

OpenShift Interactive Learning Portal https://learn.openshift.com/

Partner Openshift Onboarding Guide https://www.openshift.com/partners/get-started/

index.html

OpenShift 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_docke

<u>r</u>

Examples of scan ready Dockerfiles https://github.com/RHC4TP/starter.git

Docker tagging https://docs.docker.com/engine/reference/com

mandline/tag/