



# Red Hat Subscription Management 1

## Red Hat Cloud Access Reference Guide

Red Hat Cloud Access Reference Materials



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Red Hat Subscription Management Documentation Team  
rhsm-docs@redhat.com

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## Abstract

Red Hat Cloud Access allows you to move your Red Hat subscriptions from physical or on-premise systems onto specific, certified cloud providers with full support from Red Hat. This guide serves as a compilation of reference material for those who have already migrated to the public cloud.

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# CHAPTER 1. RED HAT CLOUD ACCESS PROGRAM OVERVIEW

Red Hat Cloud Access allows you to run eligible Red Hat product subscriptions on certified public cloud providers. This means you can access Red Hat products in a saved image state regardless of the environment where you use them:

- Move subscriptions and virtual images to certified public cloud providers.
- Maintain your existing support relationship with Red Hat.
- Access all errata and updates to ensure security and quality.
- Maintain the consistency and security of your applications.

Customers using Cloud Access have two options for moving their subscriptions to a public cloud:

- Upload your own images to the cloud based on your subscriptions.
- Gold Images: Use your eligible Red Hat subscriptions to unlock Red Hat Gold Images within your Amazon Web Services (AWS) console.

## 1.1. VERIFYING ELIGIBILITY FOR RED HAT CLOUD ACCESS

For a subscription to be eligible for the Red Hat Cloud Access program, it must meet certain criteria.

- Only unused subscriptions can be moved.
- The subscriptions must have either a Standard or a Premium service level agreement.

**Table 1.1. Eligibility requirements for Red Hat Cloud Access**

Offering	Requirements
Red Hat Enterprise Linux	Move only unused Red Hat Enterprise Linux Advanced Platform, Red Hat Enterprise Linux Server, or both subscriptions; have either a Standard or Premium service level agreement.
Red Hat JBoss Middleware	Have at least 1 active Premium or Standard 16-core subscription in a single Red Hat account and have a direct support relationship with Red Hat. If this requirement is not met, contact Red Hat Sales. Move only unused cores to the cloud, in any number, up to the total number of cores. You may split a 16- or 64-core subscription between public cloud use and your data center. For example, with a 16-core subscription, you may use 2 on a public cloud and 14 in your data center.
Red Hat Gluster Storage	Buy Red Hat Gluster. Contact your Red Hat Sales representative to buy eligible subscriptions.

Red Hat OpenShift Container Platform	Have at least 1 unused, active 2-core Premium or Standard Red Hat OpenShift Container Platform subscription in a single Red Hat account. Move only unused subscriptions to the cloud. Any number of subscriptions may be moved, as long as the minimum subscription requirement is achieved.
Red Hat CloudForms	Red Hat CloudForms can only be used on AWS - no other cloud providers are supported for running CloudForms in the cloud. Have at least 1 unused Red Hat CloudForms subscription in a single Red Hat account (manages 1 public cloud virtual machine). Contact Red Hat sales to buy additional eligible subscriptions or to upgrade current subscriptions to premium support if this requirement is not met. Move only unused subscriptions to the cloud. Any number of subscriptions may be moved, as long as the minimum subscription requirement is achieved.

## 1.2. CONVERTING UNITS OF ENTITLEMENTS FOR RED HAT CLOUD ACCESS SUBSCRIPTIONS

Use the table below to determine how many units of a Red Hat product you may use on a cloud provider. Certain Red Hat Enterprise Linux products with units that are "systems" may be converted. Contact your account manager to determine whether you have subscriptions that qualify.

**Table 1.2. Red Hat Cloud Access Unit Conversion Table**

Red Hat Software Subscription	"Unit" Deployed When On-Premise	"Unit" When Deployed on a Vendor Cloud
Red Hat Enterprise Linux Server (physical or virtual nodes)	Either 1 physical node or 2 virtual nodes	2 virtual nodes
Red Hat Enterprise Linux Server product	1 system	1 virtual guest
Red Hat JBoss Enterprise Application Platform	Core band	1 virtual core up to the maximum number of cores in the core band [a]
Red Hat JBoss Web Server	Core band	1 virtual core up to the maximum number of cores in the core band [a]
Red Hat Gluster Storage for Public Cloud	not applicable	1 virtual guest
Red Hat CloudForms Premium	not applicable	1 virtual guest



[a] Except for vendor instance sizing that is determined based on physical hardware specifications, in which case the cloud “unit” shall be 1 physical core.

## CHAPTER 2. ENABLING AND MAINTAINING SUBSCRIPTIONS FOR CLOUD ACCESS

In order to utilize Red Hat Cloud Access and use your Red Hat subscriptions in the public cloud, you need to enable your subscriptions for Cloud Access. When you enable a subscription, you tell us that you intend to use all or a portion of the entitlements in the public cloud.

Before you begin, you'll need to have account information for your CCSPs on hand, as well as an estimate of how many entitlements of a Red Hat subscription you anticipate deploying to the CCSP. You can always update this information later. As time goes on and your cloud strategy changes, you can easily keep this information up to date.

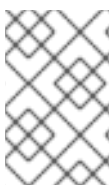
When you visit the Cloud Access Dashboard in [Red Hat Subscription Management](#), you can see subscriptions that have been enabled for Cloud Access, as well as the CCSP accounts for which those subscriptions are enabled. You can quickly enable new subscriptions and add new CCSPs or CCSP accounts, making it simple to maintain your Cloud Access data over time.

### 2.1. ENABLING A SUBSCRIPTION FOR A NEW CERTIFIED CLOUD AND SERVICE PROVIDER

Whether you're using Cloud Access for the very first time or adding a new public cloud to your existing hybrid cloud, you must create a new CCSP entry and enable subscriptions to it in order to get started.

#### Solution

1. Log in to Red Hat Subscription Management.
2. Navigate to the [Cloud Access Dashboard](#) from the top menu bar.
3. Click **Enable a new provider**.
4. Select the correct CCSP from the dropdown menu.
5. Enter your account information for the CCSP, including the account number. You can enter up to 100 accounts at a time.
6. Choose the subscription(s) you plan to deploy on the CCSP. Only eligible subscriptions are listed.
7. For each subscription you want to enable, enter the anticipated maximum number of subscription entitlements that you plan to deploy on the CCSP in the **Maximum Enabled Entitlement Quantity** field.
8. Click **Enable**.



#### NOTE

The number of entitlements that you enable cannot exceed the total value of entitlements purchased with the subscription displayed in the **Entitlement Quantity** column.

When you have successfully completed the form, you will see the CCSP added to your Cloud Access Dashboard. You can view the subscriptions enabled for the CCSP under the Enabled Products tab, and the CCSP accounts you added under the **Accounts** tab. Once the product is enabled, you will be able to

see it listed under the **Enabled Products** tab under that particular CCSP.

## 2.2. ENABLING ADDITIONAL SUBSCRIPTIONS FOR RED HAT CLOUD ACCESS

If you have enabled Red Hat subscriptions for a Certified Cloud and Service Provider in the past, you can quickly enable additional subscriptions.

### Solution

1. Log in to Red Hat Subscription Management.
2. Navigate to the [Cloud Access Dashboard](#) from the top menu bar.
3. Click **Enable new products**.
4. Choose the subscription(s) you plan to deploy on the CCSP. Note that only eligible subscriptions are listed.
5. For each subscription you want to enable, enter the anticipated maximum number of subscription entitlements that you plan to deploy on the CCSP in the **Maximum Enabled Entitlement Quantity** field.
6. Click **Enable**.



### NOTE

The number of entitlements that you enable cannot exceed the total value of entitlements purchased with the subscription displayed in the **Entitlement Quantity** column.

The updated products and their entitlement quantities are listed under the **Enabled Products** tab for that CCSP.

## 2.3. ENABLING ADDITIONAL ACCOUNTS FOR A CERTIFIED CLOUD AND SERVICE PROVIDER

### Solution

1. Log in to Red Hat Subscription Management.
2. Navigate to the [Cloud Access Dashboard](#) from the top menu bar.
3. Click **Add accounts**.
4. Enter your account information for the CCSP you are using, including the account number. You can enter up to 100 accounts at a time.
5. Click **Add**.

Once the account is added, you will be able to see it listed on the **Accounts** tab for that particular CCSP.

## CHAPTER 3. USING RED HAT GOLD IMAGES

Red Hat Gold Images make it fast and easy to deploy instances using your Red Hat Enterprise Linux subscriptions in AWS. These pre-built, certified images are provided to you in your console or CLI and can be deployed in just a few clicks.

### 3.1. RED HAT GOLD IMAGE BASICS

Red Hat Gold Images receive updates via the Red Hat Update Infrastructure (RHUI), so they do not need to check in to Red Hat Subscription Management or Satellite in order to receive update content. However, they still consume entitlements.

If you copy or modify the Gold Image, the resulting image snapshot will no longer connect to RHUI when it is deployed on future instances, and will need to connect to Red Hat Subscription Management, Satellite, or another subscription management tool in order to receive updates and support.

When Red Hat and the CCSP publish new Gold Images, these will be made available in your CCSP accounts. You do not need to take any action to receive access to future versions of Gold Images.

#### 3.1.1. Naming and identifying Red Hat Gold Images in AWS

There are multiple ways to search for and launch Red Hat Enterprise Linux AMIs in AWS. This includes the EC2 Management Console, AWS CLI, and PowerShell Cmdlet. The naming convention for the Red Hat AMIs in AWS is as follows:

- Initial GA AMI release: [Red Hat Product]-[Version]-[Virtualization Type]-[Red Hat Release Type]-[Release Date]-[Minor Version Release AMI Iteration]-[Subscription Model]-[EBS Volume Type]
- After the initial GA AMI release: [Red Hat Product]-[Version]-[Virtualization Type]-[Release Date]-[Minor Version Release AMI Iteration]-[Subscription Model]-[EBS Volume Type]
- The Red Hat Gold Images will have the designation of Access in the AMI Name representing the subscription model.

Red Hat Gold Images are published under the Owner ID **309956199498**. You can ensure that you are using official Red Hat Gold Images by looking for this owner ID when you choose an image.

#### 3.1.2. Locating Red Hat Gold Images in the AWS EC2 Management Console

When working in the [EC2 Management Console](#) there is a menu item for **AMIs** under the **IMAGES** section within the left-side navigation pane. In this view, using the designation of Private images will display the Red Hat Gold Images which have been shared with the AWS account provided during enrollment. \* When in this section of the EC2 Management Console, it is possible to add a filter of **Owner : 309956199498** which will limit the displayed AMIs to those which were shared with the AWS account after enrolling in Cloud Access. \* It is also possible to further filter the list of displayed AMIs by adding an additional filter representing different aspects of the AMI Name which Red Hat uses such as **AMI Name : RHEL, AMI Name : RHEL-Atomic, AMI Name : 7.3**

If the **Launch Instance** button is used from the EC2 Dashboard section of the [EC2 Management Console](#), and after selecting **My AMIs**, the filter Shared with me will filter the listed AMIs to show the Red Hat Gold Images which have been shared with the AWS account provided during enrollment.

If the **Launch Instance** button is used from the EC2 Dashboard section of the [EC2 Management Console](#), and after selecting **My AMIs**, the filter **Shared with me** will filter the listed AMIs to show the Red Hat Gold Images which have been shared with the AWS account provided during enrollment.

### 3.1.3. Locating Red Hat Gold Images in the AWS command line interface

This example command will display all of the RHEL 7.3 AMIs in the US-East-1 region which were shared with the AWS account provided during enrollment in Cloud Access using the AWS CLI. The [AWS CLI Command Reference](#) provides additional documentation regarding available options, commands, subcommands, and parameters.

```
$ aws ec2 describe-images --owners 309956199498 \
> --filters "Name=is-public,Values=false" \
> "Name=name,Values=RHEL*7.3*GA*Access*" \
> --region us-east-1
```

### 3.1.4. Locating Red Hat Gold Images in the AWS PowerShell Cmdlet

This example command will display all of the RHEL 7.3 AMIs in the US-East-1 region which were shared with the AWS account provided during enrollment in Cloud Access using the AWS Tools for Cmdlet. The [AWS Tools for Cmdlet Reference](#) provides additional documentation on the PowerShell cmdlets.

```
PS > Get-EC2Image -Region us-east-1 `
>> -Owner 309956199498 -Filter `
>> @{ Name="name" ; Values="RHEL*7.3*GA*Access*" }
```

### 3.1.5. Additional Resources for Gold Images with AWS

- [Release Notes for Red Hat Enterprise Linux AMIs in AWS EC2](#)
- [Red Hat Gluster Storage Deployment Guide for Public Cloud](#)
- [Red Hat Enterprise Linux Atomic Host AMI IDs](#)
- [Red Hat Enterprise Linux Atomic Host AWS Installation Guide](#)
- [Deploying OpenShift Container Platform 3.5 on Amazon Web Services](#)
- [Deploying Red Hat JBoss Enterprise Application Platform on Amazon EC2](#)

## 3.2. RED HAT GOLD IMAGES ON MICROSOFT AZURE

Red Hat Gold Images on Azure are deployable images published by Microsoft and certified by Red Hat. They are available directly from your Azure CLI or Portal, without the need to build and upload an image manually.

In order to use Red Hat Gold Images on Azure, you must have active Red Hat subscriptions that meet the [eligibility criteria](#) for Red Hat Cloud Access. Additionally, this offer is only available in regions where the Azure Marketplace is available. You can learn more about [Azure Marketplace availability at Microsoft](#).

When new versions of enabled Red Hat products are available as Gold Images, these images will automatically be visible to your enabled Azure Subscription IDs, provided that your active Red Hat subscriptions meet the eligibility criteria.

### 3.2.1. Gaining access to Red Hat Gold Images on Azure

Red Hat and Microsoft have fully automated the process of accessing Gold Images on Azure, so you can start to deploy these images. Depending on your historical use of Red Hat Cloud Access with Azure, you will need to complete a few short, simple steps.

#### 3.2.1.1. Enabling Red Hat subscriptions for Microsoft Azure for the first time

If this is your first time using Red Hat subscriptions on Azure, you'll need to enable those subscriptions for Red Hat Cloud Access in order to gain access to the Gold Images. You can also find [instructions for enabling your subscriptions for the first time](#).

#### 3.2.1.2. Enabling existing Red Hat subscriptions for Microsoft Azure

If you have previously enabled Red Hat subscriptions on Azure, Red Hat has already migrated that data into the new tooling. However, you do need to submit your Azure Subscription ID so that Red Hat can grant your Azure Subscription IDs access to Gold Images.

##### Procedure

1. Log in to Red Hat Subscription Management.
2. Navigate to the [Cloud Access Dashboard](#) from the top menu bar.
3. Find Azure from your list of enabled Certified Cloud and Service Providers (CCSPs). If you do not use multiple CCSPs, Azure may be the only provider listed.
4. Click on the **Microsoft Azure Subscriptions** tab.
5. Click the **three horizontal dot (kebab)** icon next to the Azure Subscription ID that you want to grant access to Red Hat Gold Images.
6. Click **Activate Red Hat Gold Images**.

Once activated, Red Hat Gold Images are typically available in your Azure Subscription IDs within three hours. If you do not see Red Hat Gold Images in your Azure Subscription IDs after three hours, please double check that the correct Azure Subscription IDs have been added to Red Hat Cloud Access. If the problem persists, contact Red Hat support for assistance.

#### 3.2.1.3. Adding additional Azure subscription IDs to Cloud Access in order to gain access to Red Hat Gold Images

If you have additional Azure Subscription IDs which need access to Red Hat Gold Images, or if the Azure Subscription IDs you see in the **Azure Subscriptions** tab are inaccurate or out-of-date, you can add the correct subscriptions instead.

In the coming weeks, Red Hat will add the ability to update or delete existing Azure Subscription IDs. In the meantime, add additional subscriptions if any of the displayed information is incorrect.

##### Procedure

1. Log in to Red Hat Subscription Management.
2. Navigate to the [Cloud Access Dashboard](#) from the top menu bar.

3. Click on the **Microsoft Azure Subscriptions** tab.
4. Click **Add Subscriptions**.
5. Enter your Azure subscription information including the **Subscription ID**. You can enter up to 10 Subscription IDs at a time.
6. Click **Add**.

Once added, Red Hat Gold Images are typically available in your Azure Subscription IDs within three hours.

### 3.2.2. Locating and using Red Hat Gold Images on Azure

After enabling a subscription for Cloud Access on Azure, a set of production-ready, private Red Hat Enterprise Linux images are shared with the Subscription IDs that you added to Cloud Access. When new versions of Red Hat Enterprise Linux Gold Images are created, they will automatically become available to your Azure Subscription IDs.

### 3.2.3. Naming conventions for Red Hat Gold Images on Azure

Red Hat Gold Images for Azure are published under the following metadata. You should confirm that images match the publisher and offer to ensure that the official images are deployed in your environment.

**Table 3.1. Images for Cloud Access**

Publisher	Offer
RedHat	rhel-byos

Image URNs follow a specific naming convention: '[publisher]:[offering]:[product-version]:[buildversion]'. The latest build of a product can be identified by replacing the '[buildversion]' with latest.

#### Resources

- [Use Red Hat Gold Images in the Azure Portal](#)
- [Use Red Hat Gold Images in the Azure CLI](#)
- [Use Red Hat Gold Images with an Azure PowerShell Cmdlet](#)

### 3.2.4. Additional resources for Gold Images with Azure

- [Overview of Red Hat Enterprise Linux images](#)
- [Red Hat Enterprise Linux Bring-Your-Own-Subscription Gold Images in Azure](#)